

WAGNER & HOLLENBECK  
ORGANIZATIONAL  
BEHAVIOR  
*Securing Competitive Advantage*

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# Organizational Behavior

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# Organizational Behavior

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## Securing Competitive Advantage

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To Mary Jane, Allison, Jillian, and Andrew Wagner  
To Patty, Jennifer, Marie, Tim, and Jeff Hollenbeck

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## About the Authors

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**John A. Wagner III** is professor and former chair of the Department of Management in the Eli Broad College of Business and Graduate School of Management at Michigan State University. Professor Wagner received his Ph.D. degree in business administration from the University of Illinois at Urbana–Champaign in 1982. He has taught undergraduate and graduate courses in management, organizational behavior, and organization theory. Professor Wagner is an associate editor of the *Administrative Science Quarterly* and past member of the board of *Academy of Management Review*. He is also series editor of *Qualitative Organizational Research*. In 1989 Professor Wagner was co-recipient of the Scholarly Achievement Award conferred by the Human Resources Division of the Academy of Management. In 1993 he received the Research Methods Division's Walter de Gruyter Best Paper Award. He is a member of the Academy of Management and the Decision Sciences Institute. Professor Wagner's research is in the fields of organizational behavior and organization theory. His publications have focused on coordinated performance in organizations and have examined the efficacy of participatory decision making, the long-term effects of incentive payment on group productivity, the effects of individualism–collectivism on cooperation and team member performance, and the effects of size on the performance of groups and organizations.

**John R. Hollenbeck** received his Ph.D. in management from New York University in 1984, and he is currently the Eli Broad Professor of Management at the Eli Broad Graduate School of Business Administration at Michigan State University. Dr. Hollenbeck served as the acting editor at *Organizational Behavior and Human Decision Processes* in 1995, the associate editor of *Decision Sciences* from 1999 to 2004, and the editor of *Personnel Psychology* from 1996 to 2002. Prior to serving as editor, he served on the editorial board of these journals, as well as the boards of the *Academy of Management Journal*, *Academy of Management Review*, *Journal of Applied Psychology*, and the *Journal of Management*. Dr. Hollenbeck has published over 75 articles and book chapters on the topics of team decision making and work motivation. Much of this research has been funded by the Office of Naval Research and the Air Force Office of Scientific Research. According to the Institute for Scientific Research this body of work has been cited over 1,500 times. He has also co-authored two of the leading textbooks in the field of human resource management and organizational behavior. Dr. Hollenbeck was the first recipient of the Ernest J. McCormick Award for Early Contributions to the field of industrial and organizational psychology in 1992 and is a Fellow of the Academy of Management, and the American Psychological Association.

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# Preface

## Competing for Advantage

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In today's business environment, competition arises when other organizations seek to do what your company does, only better. Advantage is gained when you can do something your competitors find difficult to duplicate. Competitive advantage is further secured when competitors cannot duplicate your company's special ability at all.

We contend—based on solid research evidence—that an especially strong source of competitive advantage rests in the hands of the people who make up an organization. One of the most effective ways to secure competitive advantage is to make the best use of the knowledge, skills, and other human assets possessed by a company's employees. No other firm has the same people. Therefore, no other company can duplicate the range of products and services requiring the particular capabilities of the company's members. Managing organizational behavior is thus essential to the process of gaining and sustaining competitive advantage. This statement is a central theme of our book.

Chapters in the book cover the major topics constituting the field of organizational behavior, and do so with special emphasis on the findings of rigorous organizational research. The models and concepts presented in the following chapters are grounded in literally thousands of studies of behavior in and of organizations. Rather than chasing current fads or fashions, our focus as authors is on surveying and explaining research-based practices that have been proven to work over the long term. Chapters focus on key variables that managers can modify to manage organizational behavior, and on relationships among those variables that can help managers determine the likely consequences of managerial action. Managerial tools derived from rigorous research are the means through which managers can secure competitive advantage in the most effective manner. Understanding them and being able to put them to use is critical to managerial effectiveness and organizational success.

Additional instructor resources linked to the book chapters are available on the companion website, [www.routledge.com/textbooks/wagner](http://www.routledge.com/textbooks/wagner).

### An Invitation

By reading our book, you are committing yourself to learn how to manage organizational behavior. We can't think of anything more important for you to understand. In return for this commitment, we extend a special invitation to you, our newest student. We want to know how you like our book and how you feel about the field of organizational behavior. We encourage you to contact us with your ideas, especially your suggestions for making improvements to future editions. Please write to us at:

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John A. Wagner III  
John R. Hollenbeck

Part I

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# Introduction

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# Organizational Behavior

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Imagine that you are a manager seeking to improve employee productivity in the face of unacceptably high production costs. Initial assessments indicate that productivity lapses in your company are due to poor employee motivation, and your boss tells you to solve this problem. Your future with the company—and possibly the future of the company itself—depends on whether you can find a way to improve employee motivation. To help you decide what to do, you call in four highly recommended management consultants.

After analyzing your company's situation, the first consultant states that many of today's jobs are so simple, monotonous, and uninteresting that they dampen employee motivation and fulfillment. As a result, employees become so bored and resentful that productivity falls off. The consultant recommends that you redesign your firm's jobs in order to make them more complex, stimulating, and fulfilling. Employees challenged by these new jobs will feel motivated to improve performance, leading to higher workforce productivity and reduced production costs.

The second consultant performs her own assessment of your company. As she reviews her findings, she agrees that monotonous work can reduce employee motivation. She says, however, that the absence of clear, challenging goals is an even greater threat to motivation and productivity at your firm. Such goals provide performance targets that draw attention to the work to be done and focus employee effort on achieving success. The second consultant advises you to solve your company's productivity problem by implementing a program of formal goal setting.

The third consultant conducts an investigation and concedes that both job design and goal setting can improve employee motivation. She suggests, however, that you consider establishing a contingent payment program. Contingent payment means paying employees according to their performance instead of giving them fixed salaries or hourly wages. For instance, salespeople may be paid commissions on their sales, production employees may be paid piece-rate wages according to their productivity, and executives may be paid bonuses based on the firm's profitability. The consultant points out that contingent payment programs change the way wages are *distributed* but not necessarily the *amount* of wages paid to the workforce as a whole.

Finally, the fourth consultant examines your situation and agrees that any of the other three approaches might work, but describes another technique that is often used to deal with motivational problems—allowing employees to participate in decision making. He suggests that such participation gives employees a sense of belonging or ownership that energizes productivity. To support his recommendation, he recites an impressive list of companies—among them, General Motors, IBM, and General Electric—that have established well-known participatory programs.

Later, alone in your office, you consider the four consultants' reports and conclude that you should probably recommend all four alternatives—just in case one or more of the consultants are wrong. Unfortunately, you also realize that your company can afford the time and money needed to implement only one of the recommendations. What should you do? Which alternative should you choose?

According to contemporary research comparing the effectiveness of these alternatives, if you choose the first option, job redesign, productivity would probably rise by 9 percent.<sup>1</sup> An increase of this size would save your job, keep your company in business, and probably earn you the company president's lasting gratitude. If you choose the second alternative, goal setting, productivity would probably increase by 16 percent.<sup>2</sup> This outcome would save your job and your company, and it might even put you in the running for a promotion. If you choose the third alternative, contingent payment, productivity could be expected to increase by approximately 30 percent.<sup>3</sup> A gain of this magnitude would ensure your place in the company's executive suites for the rest of your career.

But what about the fourth alternative, employee participation in decision making? How might this approach affect productivity, where low performance is attributable to poor motivation? Knowing that managers are choosing participatory programs on a regular basis to solve motivation problems, you might think that this alternative should work at least as well as the other three. Surprisingly, however, participation usually has no meaningful effect on productivity problems caused by poor motivation. Despite the fourth consultant's suggestion, employee participation is likely to improve motivation and performance only when combined with one or more of the other three alternatives.<sup>4</sup> If you choose participation, then, you and the other members of your firm might soon be looking for new jobs. Perhaps your choice might even cost your company its existence.

How realistic is this story? In fact, the predicament it portrays is an everyday problem. Experts throughout the world have pointed out many instances of low organizational productivity, often identifying "people problems" as an important factor in causing these situations.<sup>5</sup> Solving such problems is critical to company survival and growth in today's competitive environment. Knowing which solutions to choose and how to implement them will differentiate organizations that succeed and thrive from those that fail. Such knowledge is thus a clear source of competitive advantage and success.

More generally, competitive success depends on the ability to produce some product or service that is perceived as valuable by some group of consumers, and to do so in a way that no one else can duplicate.<sup>6</sup> At first glance, there appear to be many ways to accomplish this feat. Most experts agree, however, that an organization's employees are its foremost source of competitive advantage. If your company employs the best people and is able to hold on to them, it enjoys a competitive edge not easily duplicated by other firms. If your company also has the "know-how" to properly manage its employees, it has an advantage that can be sustained and even strengthened over time.<sup>7</sup>

The know-how needed to solve motivational productivity problems like those focused upon in our opening example can be found in the field of organizational behavior. Without this knowledge, managers have no solid basis for accepting any one consultant's advice or for choosing one particular way to solve people problems instead of another. With it, managers have the guidance needed to avoid costly or even catastrophic mistakes and instead make effective choices that secure competitive success. *The management of people through the application of knowledge from the field of organizational behavior is a primary means through which competitive advantage can be created and sustained.*

## Defining Organizational Behavior

**Organizational behavior** is a field of study that endeavors to understand, explain, predict, and change human behavior as it occurs in the organizational context. Underlying this definition are three important considerations:

1. Organizational behavior focuses on observable behaviors, such as talking in a meeting, running production equipment, or writing a report. It also deals with the internal states, such as thinking, perceiving, and deciding, that accompany visible actions.
2. Organizational behavior involves the analysis of how people behave both as individuals and as members of groups and organizations.
3. Organizational behavior also assesses the “behavior” of groups and organizations per se. Neither groups nor organizations “behave” in the same sense that people do. Nevertheless, some events occur in organizations that cannot be explained in terms of individual behavior. These events must be examined in terms of group or organizational processes.

Research in organizational behavior traces its roots to the late 1940s, when researchers in psychology, sociology, political science, economics, and other social sciences joined together in an effort to develop a comprehensive body of organizational knowledge.<sup>8</sup> As it has developed, the field of organizational behavior has grown into three distinct subfields, delineated in Table 1.1: micro organizational behavior, meso organizational behavior, and macro organizational behavior.

### Micro Organizational Behavior

**Micro organizational behavior** is concerned mainly with the behaviors of individuals working alone.<sup>9</sup> Three subfields of psychology were the principal contributors to the beginnings of micro organizational behavior. *Experimental psychology* provided theories of learning, motivation, perception, and stress. *Clinical psychology* furnished models of personality and human development. *Industrial psychology* offered theories of employee selection, workplace attitudes, and performance assessment. Owing to this heritage, micro organizational behavior has a distinctly psychological orientation. Among the questions it examines are the following: How do differences in ability affect employee productivity? What motivates employees to perform their jobs? How do employees develop perceptions of their workplace, and how do these perceptions in turn influence their behavior?

**Table 1.1** Subfields of Organizational Behavior

Subfield	Focus	Origins
Micro organizational behavior	Individuals	Experimental, clinical, and organizational psychology
Meso organizational behavior	Groups	Communication, social psychology, and interactionist sociology, plus the origins of the other two subfields
Macro organizational behavior	Organizations	Sociology, political science, anthropology, and economics



### Meso Organizational Behavior

**Meso organizational behavior** is a middle ground, bridging the other two subfields of organizational behavior.<sup>10</sup> It focuses primarily on understanding the behaviors of people working together in teams and groups. In addition to sharing the origins of the other two subfields, meso organizational behavior grew out of research in the fields of *communication*, *social psychology*, and *interactionist sociology*, which provided theories on such topics as socialization, leadership, and group dynamics. Meso organizational behavior seeks answers to questions such as the following: What forms of socialization encourage co-workers to cooperate? What mix of skills among team members increases team performance? How can managers determine which prospective leader will be the most effective?

### Macro Organizational Behavior

**Macro organizational behavior** focuses on understanding the “behaviors” of entire organizations.<sup>11</sup> The origins of macro organizational behavior can be traced to four disciplines. *Sociology* provided theories of structure, social status, and institutional relations. *Political science* offered theories of power, conflict, bargaining, and control. *Anthropology* contributed theories of symbolism, cultural influence, and comparative analysis. *Economics* furnished theories of competition and efficiency. Research on macro organizational behavior considers questions such as the following: How is power acquired and retained? How can conflicts be resolved? What mechanisms can be used to coordinate work activities? How should an organization be structured to best cope with its surrounding environment?

### Contemporary Issues

Considered both individually and collectively, the three subfields of organizational behavior offer valuable information, insights, and advice to managers facing the challenge of understanding and reacting to a broad range of contemporary management issues.<sup>12</sup> According to a variety of sources, today’s managers find five of these issues especially important: workforce diversity, team productivity, organizational adaptability, international growth and development, and ethical concerns.

### Workforce Diversity

Within the societal cultures of the United States and Canada, subcultural differences once ignored by many managers now command significant attention and sensitivity. Historically, the North American workforce has consisted primarily of white males. Today, however, white males make up far less than 50 percent of business new hires in the United States, whereas women and African American, Hispanic, and Asian men account for increasingly large segments of the U.S. workforce. Moreover, in the last ten years the number of women and minorities assuming managerial positions in the U.S. workforce has grown by over 25 percent.<sup>13</sup> It is becoming—and will continue to become—even more important for managers to know about and be ready to respond to the challenges deriving from individual differences in abilities, personalities, and motives. Knowledge about the workplace consequences of these differences, drawn from the subfield of micro organizational behavior, can provide managers with help in this regard.

### Team Productivity

Management is becoming less of a process relying on top-down command and control, where managers have all the power and nonmanagerial employees have little say in what they do.<sup>14</sup> For various reasons organizations now use greater amounts of *empowerment*—the delegation to nonmanagers of the authority to make significant decisions on their jobs. Often, empowerment is accomplished by grouping employees into teams and then giving those teams responsibility for self-management activities such as hiring, firing, and training members, setting production targets, and assessing output quality. Guidance from meso organizational behavior precepts can help managers establish realistic expectations about the implementation difficulties and probable effects of team-based empowerment.

### Organizational Adaptability

In today's business world, emphasis is shifting from the mass production of low-cost, interchangeable commodities to the production of high-quality goods and services, made individually or in small batches and geared to meet the specific demands of small groups of consumers. This shift requires greater flexibility than ever before and necessitates that quality receive greater emphasis than it has in the past. Companies are reacting by implementing programs that require new ways of dividing an organization's work into jobs and coordinating the efforts of many employees.<sup>15</sup> Implementations of this sort benefit from insights derived from macro organizational behavior.

### International Growth and Development

Fewer firms today limit their operations to a single national or cultural region than was once the case. Instead, multinationalism or even statelessness has become the norm. The resulting globalization is changing the way business is conducted, and it promises to continue to do so at an increasing pace.<sup>16</sup> Managers facing this massive change must develop increased sensitivity to international cultural differences. All three subfields of organizational behavior have valuable advice to offer managers confronted with this challenge.

### Ethical Concerns

Managing organizational behavior inevitably involves the acquisition and use of power. Thus, managers continually face the issue of determining whether the use of power in a given instance is effective and appropriate. One approach in dealing with this issue is to adopt the *utilitarianist* perspective and judge the appropriateness of the use of power in terms of the consequences of this use. Does using power provide the greatest good for the greatest number of people? If the answer to this question is "yes," then the utilitarian perspective would suggest that power is being used appropriately.

A second perspective, derived from the theory of *moral rights*, suggests that power is used appropriately only when no one's personal rights or freedoms are sacrificed. It is certainly possible for many people to derive great satisfaction from the use of power to accomplish some purpose, thus satisfying utilitarian criteria, while simultaneously causing the rights of a few individuals to be abridged. According to the theory of moral rights, the latter effect is an indication of inappropriateness. Power holders seeking to use their power appropriately must therefore respect the rights and interests of the minority as well as look after the well-being of the majority.

A third perspective, drawn from various theories of *social justice*, suggests that even having respect for the rights of everyone in an organization may not be enough to fully justify the use of power. In addition, those using power must treat people equitably, ensuring that people who are similar in relevant respects are treated similarly whereas people who are different are treated differently in proportion to those differences. Power holders must also be accountable for injuries caused by their use of power and must be prepared to provide compensation for these injuries.

Obviously, the three perspectives offer conflicting criteria, suggesting that no simple answers exist for questions concerning the appropriateness of using power. Instead, as power holders, managers must seek to balance efficiency, entitlement, and equity concerns as they attempt to influence the behaviors of others.<sup>17</sup>

### Putting Organizational Behavior Knowledge to Work

Putting theoretical knowledge from the field of organizational behavior to practical use requires that managers develop skills in using such knowledge to identify and solve problems in an effective manner. To develop your own managerial skills and learn how to put them to work, it is important that you understand the process of problem solving and become proficient at experimenting with ways of becoming a better problem solver. The process of problem solving can be simplified and made more effective by breaking it into the four stages described in Table 1.2: diagnosis, solution, action, and evaluation.<sup>18</sup>

#### Diagnosis

Problem solving begins with **diagnosis**, a procedure in which managers gather information about a troublesome situation and try to summarize it in a *problem statement*. Information gathering may require direct observation of events in or around an organization. Experts often praise the practice of “managing by wandering around,” in part because it provides a rich source of firsthand information that can be used during problem-solving procedures.

Managers may also conduct interviews to gather facts and opinions, or administer questionnaires to collect others’ views. Both approaches lack the immediacy of personal observation, but enable the collection of diverse information and opinions.

Summarizing information in a problem statement requires that managers use the mix of theories, experience, and intuition they have amassed to construct a statement of what is wrong. Often the information placed before a manager looks much like the kind of data

Table 1.2 Four Stages of Problem Solving

Stage	Description
Diagnosis	Collection of information about a troubling organizational situation and summarization of this information in a problem statement.
Solution	Identification of ways to resolve the problem identified during diagnosis.
Action	Stipulation of the activities needed to solve the problem and oversight of the implementation of these activities. Also, identification of the indicators to be used to measure success and collection of data reflecting these measures.
Evaluation	Determination of the extent to which the actions taken to solve the problem had the intended effect, using the indicators and data collected during the action stage.

that a medical doctor uses to identify the source of an illness. Just as the doctor may have to consider evidence of fever, body pain, and nausea to diagnose a case of influenza, the manager may have to interpret the meanings of numerous *symptoms* to formulate a problem statement.

For example, when the Buick Motor Division of General Motors dropped Plumley Companies as a supplier of hoses and other rubber parts, citing poor product quality, company owner Michael A. Plumley discovered that workers wanted to produce good parts but lacked the knowledge and skills necessary to perform their jobs correctly. After stepping up worker training, the company improved its situation substantially and now holds quality awards from GM, Nissan, Ford, and Chrysler.<sup>19</sup> As indicated in this example, the manager, acting as a diagnostician, often must take responsibility for analyzing the individual symptoms and learning how they fit together to point toward the larger problem.

### Solution

**Solution** is the process of identifying ways to resolve the problem identified during the diagnosis phase. Organizational problems are often multifaceted, and usually more than one way to solve a given problem exists. Effective managers consider several reasonable alternatives before choosing one. In the case of Plumley Companies, Michael Plumley considered but ruled out poor supervision, equipment deficiencies, raw material defects, and employee motivation, and also considered a variety of training approaches before making a final choice. More generally, managers prescribing solutions must resist the urge to *satisfice*—to choose the first alternative that seems workable—and must instead push themselves to consider several potential solutions and choose the best available alternative.<sup>20</sup>

### Action

**Action** is setting a proposed solution into motion. In this stage, managers must first stipulate the specific activities they believe are needed to solve a particular problem and then oversee the implementation of these activities. Sometimes it is possible to implement a step-by-step program that was developed earlier to solve a similar problem encountered previously or in another organization. General Motors used this approach when it adopted product quality and customer service programs first developed in its Saturn Division throughout its other automotive divisions. In other cases it is necessary to start from scratch, creating a new sequence of activities to be implemented for the first time. IBM forced the developers of its first personal computer to use this approach by isolating them from the rest of the company's operations. Because of their isolation, staff members could not solve problems by simply referring to procedures used elsewhere in the company. The innovation and creativity stimulated by this approach, and the subsequent success of IBM's personal computer, led many other companies to emulate IBM's strategy—patterned after earlier programs at Lockheed Aircraft (now Lockheed Martin Corporation)—of creating a “skunkworks” for new product development.

### Evaluation

Problem solving concludes with **evaluation**, the process of determining whether actions taken to solve the problem had the intended effect. To evaluate their solutions properly, managers must identify in advance the indicators they will use to measure success and collect measures of these indicators as the action stage proceeds. For instance, to evaluate a program

intended to improve productivity, managers must decide what kinds of measures to use—for example, counts of items produced, questionnaire indices of customer satisfaction, dollar volume of sales, or similar measures. They must then decide how to collect this information and what value or cutoff amount to use as an indication of success (for example, a 5 percent increase in sales, measured as booked transactions).

The evaluation process highlights any differences between the intended results of a particular solution and the actual results. Sometimes the chosen course of action completely resolves the problem. Often, however, additional problems are uncovered and further problem solving becomes necessary. At this point, managers use evaluation information as diagnostic data and the process of problem solving begins again.<sup>21</sup>

### **Becoming an Active Problem Solver**

As you read this book, you will find yourself thinking about how you might use textbook information to solve real-world problems. To sharpen your skills as a problem solver, we suggest that you study each theory presented in this book to develop a basic understanding of the variables and relationships it describes. As you grow more comfortable applying the theories, try combining them to develop more comprehensive management tools. For example, you might blend theories of employee motivation, leadership, and job design to develop an enriched explanation of the causes of poor employee performance.

You should also practice following the theories applied during problem definition to their logical conclusions. For instance, the same theory of employee motivation that you use to diagnose a productivity problem in a case may also suggest the actions needed to reduce or eliminate the problem. Similarly, a theory of leadership that helps you begin an exercise on the distribution of power may also provide guidance about how power should be managed later in the exercise. At the same time, you should work on applying several theories simultaneously as you diagnose problems and search for solutions. The more theories you apply during diagnosis, the more comprehensive your final solution is likely to be. As you become a more skillful problem solver, the solutions you devise are likely to become increasingly thorough and more effective.

As part of the process of learning how to apply the material in this book, you should also practice specifying the actions required to implement and assess your proposed solution. Your action plan should include a sequence of steps that indicate what needs to be done, who will do it, and when it will be done. Your evaluation procedure should indicate how you plan to measure the effectiveness of your actions as well as what you expect to do if the evaluation reveals shortcomings in your solution.

### **Overview of This Book**

As we have indicated in this chapter, our book focuses on providing conceptual frameworks that will prove helpful in the future as you solve problems and manage behaviors in organizations. What you learn now will serve later as a valuable source of competitive advantage for you and your firm.

The book consists of five parts. Part I includes two introductory chapters, this one on organizational behavior and a second one on management, that provide a conceptual foundation for later chapters. Part II, on micro organizational behavior, consists of four chapters on diversity and individual differences, decision making and creativity, motivation and work performance, and satisfaction and stress at work. These chapters provide information useful for the management of people as individuals in organizations.

Part III, on meso organizational behavior, includes four chapters dealing with work design, socialization and other interpersonal processes, group and team effectiveness, and leadership in groups and organizations. These chapters furnish the information needed to manage interpersonal relations and group processes in organizations. Part IV, on macro organizational behavior, consists of four chapters on the topics of power and conflict, organization structure, organizational design, and culture and organizational development. The information in these chapters concerns organization-level problems and the management of related processes and procedures. Finally, Part V includes two chapters on topics that span the three subfields of organizational behavior. One chapter covers international organizational behavior, and the other focuses on research methods and critical thinking. Both provide information that will help you to adapt and apply what you've learned elsewhere in the book to a wide variety of situations.

## Summary

*Organizational behavior* is a field of research that helps predict, explain, and understand behaviors occurring in and among organizations. Organizational behavior's three subfields—micro organizational behavior, meso organizational behavior, and macro organizational behavior—reflect differences among the scientific disciplines that contributed to the founding of the field. As a consequence, each focuses on a different aspect of organizational behavior. *Micro organizational behavior* is concerned primarily with the attributes and performance of individuals in organizations. *Meso organizational behavior* focuses on the characteristics of groups and the behaviors of people in teams. *Macro organizational behavior* addresses the “behaviors” of organizations as entities.

Effective managers use knowledge from the three subfields during problem solving, which is the process of diagnosis, solution, action, and evaluation. *Diagnosis* involves interpreting symptoms and identifying the problem. *Solution* occurs when one or more ways of resolving the problem are formulated. In *action*, specific activities are enacted and a solution is implemented. *Evaluation*, the final phase of problem solving, involves assessing the effectiveness of the implemented solution and can serve as an input for further problem solving, if required.

## Review Questions

1. Define the field of organizational behavior. What kinds of behavior does it examine? Why is knowledge drawn from the field of organizational behavior so important for managers?
2. What are the three subfields of organizational behavior? Why have they developed separately? What kinds of organizational problems does each subfield help managers solve?
3. What are the four stages of the problem-solving process? How can knowing about them help you become a better manager?
4. Why should you refer to textbook theories during the process of problem solving? How will using this textbook make you a better manager?



# Management and Managers

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**A**lthough managers and managerial jobs are ubiquitous in contemporary life, few people really understand what managers do as they perform their jobs. Could you tell someone what management is? What skills and abilities managers need to succeed in their work? How today's management practices have developed? Modern societies depend on the well-being of organizations ranging from industrial giants like General Electric and IBM to local businesses like the corner grocery store. In turn, all of these businesses depend on the expertise of managers. It is therefore important that members of modern societies, including you, know what management is, what managers do, and how contemporary practices have developed.

This chapter introduces management theory and practice. It begins by defining the concept of management in terms of the various functions that managers perform in organizations. Next, it describes the job of a manager in greater detail, focusing on the skills managers use and the roles they fill as they perform their jobs every day. The chapter then examines how modern management theory has evolved, discussing several key schools of thought about management and managers that have developed between the late 1800s and the present.

## Defining Management

*Management*, defined most simply, is the process of influencing behavior in organizations such that common purposes are identified, worked toward, and achieved. To define management in greater detail, we must consider a closely related question: What is an organization?

## Three Attributes of Organizations

An **organization** is a collection of people and materials brought together to accomplish purposes not achievable through the efforts of individuals working alone. Three attributes enable an organization to achieve this feat: a mission, division of labor, and a hierarchy of authority.

### *Mission*

Each organization works toward a specific **mission**, which is its purpose or reason for being. As illustrated in Table 2.1, a mission statement identifies the primary goods or services that



Table 2.1 Sample Mission Statements

<i>Company</i>	<i>Mission</i>
Hershey Foods	Hershey Foods' basic business mission is to become a major, diversified food company. . . . A basic principle that Hershey will continue to embrace is to attract and hold customers with products and services of consistently superior quality and value.
Polaroid	Polaroid designs, manufactures, and markets worldwide a variety of products based on its inventions, primarily in the photographic field. These products include instant photographic cameras and films, light-polarizing filters and lenses, and diversified chemical, optical, and commercial products. The principal products of the company are used in amateur and professional photography, industry, science, medicine, and education.

Source: Excerpted from annual stockholder reports.

the organization is intended to produce and the markets that it hopes to serve. An organization's mission helps hold it together by giving members a shared sense of direction.

### *Division of Labor*

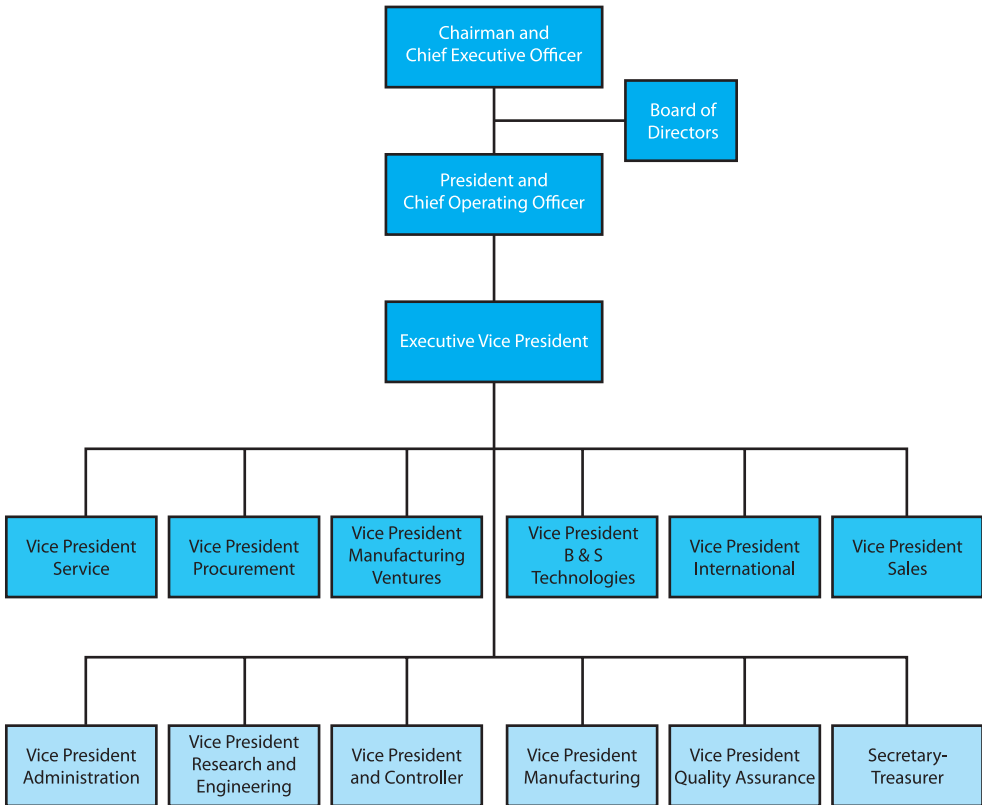
In every organization, difficult work is broken into smaller tasks. This **division of labor** can enhance *efficiency* by simplifying tasks and making them easier to perform. A classic example of this effect can be seen in the following analysis of the pin-making process by the eighteenth-century Scottish economist Adam Smith:

One man draws out the wire, another straightens it, a third cuts it, a fourth points it, a fifth grinds it at the top for receiving a head. To make the head requires two or three more operations. [Using a division of labor such as this,] ten persons could make among them upward of forty-eight thousand pins a day. But if they had all wrought separately and independently they certainly could not each of them have made twenty; perhaps not one pin in a day.<sup>1</sup>

The division of labor enables organized groups of people to accomplish tasks that would be beyond their physical or mental capacities as individuals. Few people can build a car by themselves, yet companies like Nissan turn out thousands of cars each year by dividing the complex job of building a car into a series of simple assembly-line tasks.

### *Hierarchy of Authority*

The **hierarchy of authority** is another common organizational attribute. In very small organizations, all members of the organization may share equally the authority to make decisions and initiate actions. In contrast, in larger organizations authority is more often distributed in a pyramidal hierarchical pattern like that shown in Figure 2.1. At the top of this hierarchy, the chief executive officer (CEO) has the authority to issue orders to every other member of the organization and to expect these orders to be obeyed. At successively lower levels, managers direct the activities of people beneath them and are constrained by the authority of managers above them.



**Figure 2.1** Briggs & Stratton Organization Chart

An organization chart is a graphic representation of a firm's hierarchy of authority. The organization chart in this figure shows the top and middle management of Briggs & Stratton, a manufacturer of small gasoline engines used in lawn mowers, snow blowers, and similar equipment. Note that the company is divided horizontally into various functional departments—such as manufacturing and sales—whose efforts are unified through authority relations that extend vertically between vice presidents and the CEO.

Source: Based on information contained in annual stockholder reports.

### Formal Definition

The three attributes of organizations just described help clarify the role of management in organizational life. In a sense, the first two attributes are discordant, as the mission assumes the integration of effort whereas the division of labor produces a differentiation of effort. As a result, an organization's members are simultaneously pushed together and pulled apart. Managerial influence, derived partly from the third attribute of hierarchical authority, reconciles this conflict and balances the two opposing attributes. This balancing act is what managers do and what management is all about.

**Management** is thus a process of planning, organizing, directing, and controlling organizational behaviors to accomplish a mission through the division of labor. This definition incorporates several important ideas. First, management is a process—an ongoing flow of activities—rather than something that can be accomplished once and for all. Second, managerial activities affect the behaviors of an organization's members *and* the organization itself. Third, to accomplish a firm's mission requires organization. If the mission could be

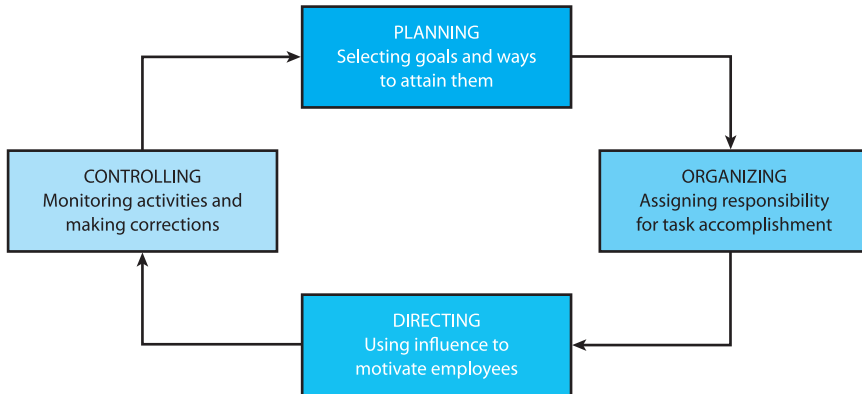


Figure 2.2 The Four Management Functions

accomplished by individuals working alone, neither the firm nor its management would be necessary. Fourth, the process of management can be further divided into the four functions shown in Figure 2.2: planning, organizing, directing, and controlling.

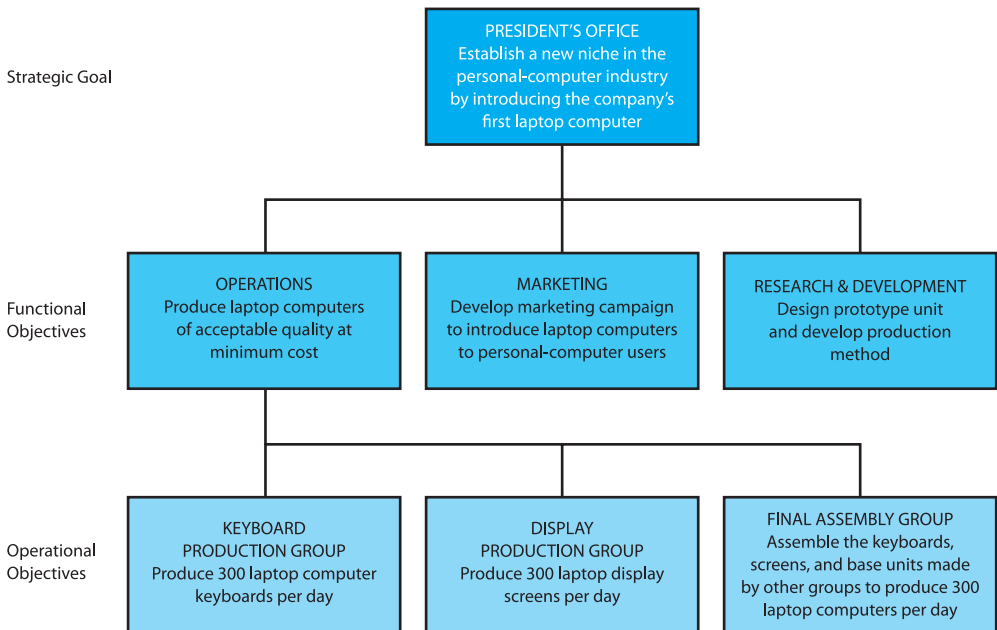
**Planning** is a forward-looking process of deciding what to do. Managers who plan try to anticipate the future, setting goals and objectives for a firm's performance and identifying the actions required to attain these goals and objectives. For example, when Robert Iger meets with other Walt Disney Company executives to develop specifications for the attractions and concessions at theme parks under construction, he is engaged in planning. In planning, managers set three types of goals and objectives:

1. *Strategic goals* are the outcomes that the organization as a whole expects to achieve by pursuing its mission.
2. *Functional or divisional objectives* are the outcomes that units within the firm are expected to achieve.
3. *Operational objectives* are the specific, measurable results that the members of an organizational unit are expected to accomplish.<sup>2</sup>

As shown in Figure 2.3, these three types of goals and objectives are linked together. The focus of lower-order objectives is shaped by the content of higher-level goals, and achieving higher-level goals depends on the fulfillment of lower-level objectives.

Goals and objectives are performance targets that the members of an organization seek to fulfill by working together—for instance, gaining control over 15 percent of the firm's market, or manufacturing less than one defective product for every thousand produced. Setting such goals and objectives helps managers plan and implement a sequence of actions that will lead to their attainment. For example, financial objectives growing out of Iger's planning meetings at Disney become targets that newly opened theme parks are expected to meet or exceed during their first few years in operation. Goals and objectives also serve as benchmarks of the success or failure of organizational behavior. When they review past performance, managers can judge the company's effectiveness by assessing its goal attainment. For example, Disney theme park managers can assess the success of their operations by comparing actual revenue and cost data with corporate profitability goals.

As part of the **organizing** function, managers develop a structure of interrelated tasks and allocate people and resources within this structure. Organizing begins when managers divide



**Figure 2.3** The Hierarchy of Goals and Objectives

An organization's strategic goals set boundaries within which functional objectives are established. In turn, functional objectives shape the objectives of operational units. Accomplishing operational objectives therefore contributes to the attainment of functional objectives and strategic goals.

an organization's labor and design tasks that will lead to the achievement of organizational goals and objectives. In companies such as Whirlpool, Boeing, and IBM, assembly operations are devised and built during this phase. Next, managers decide who will perform these tasks. To make this determination, they analyze the tasks to identify the knowledge, skills, and abilities needed to perform them successfully. They can then select qualified employees or train other employees who lack the necessary qualifications to carry out these tasks.

Grouping tasks and the people who perform them into *organizational units* is another step in the organizing process. One type of organizational unit, a *department*, includes people who perform the same type of work. For instance, all employees who market an organization's goods or services can be brought together in a marketing department. Another type of unit, a *division*, includes people who do the company's work in the same geographic territory, who work with similar kinds of clients, or who make or provide the same type of goods or services. For example, Coca-Cola has a European division that does business in Europe. General Electric's financial services division markets only financial services.

The **directing** function encourages member effort and guides it toward the attainment of organizational goals and objectives. Directing is partly a process of communicating goals and objectives to members wherein managers announce, clarify, and promote targets toward which effort should be directed. For example, Jeff Bezos is directing when he meets with other top managers at Amazon.com to announce yearly sales objectives. Directing is also a process of learning employees' desires and interests and of ensuring that these desires and interests are satisfied in return for successful goal-oriented performance. In addition, directing may require managers to use personal expertise or charisma to inspire employees to overcome obstacles that might appear insurmountable. Apple Computer's Steve Jobs relies heavily on

charisma to keep employees in his company excited about new products and market opportunities. In sum, directing is a process in which managers *lead* their subordinates, influencing them to work together to achieve organizational goals and related objectives.

**Controlling** means evaluating the performance of the organization and its units to see whether the firm is progressing in the desired direction. In a typical evaluation, managers compare an organization's actual results with the desired results as described in its goals and objectives. For example, Capital One executives might compare the actual profitability of their Visa card operations with the profitability objectives set during previous planning sessions. To perform this kind of evaluation, members of the organization must collect and assess performance information. A firm's accounting personnel might gather data about the costs and revenues of organizational activities. Marketing representatives might provide additional data about sales volume or the organization's position in the marketplace. Finance specialists might then appraise the firm's organizational performance by determining whether the ratio of costs to revenues meets or surpasses the company's target level.

If the evaluation reveals a significant difference between goals and actual performance, the control process enters a phase of *correction*. In this phase, managers return to the planning stage and redevelop their goals and objectives, indicating how differences between goals and outcomes can be reduced. The process of management then continues anew, as managers engage in additional organizing, directing, and controlling.

## What Managers Do

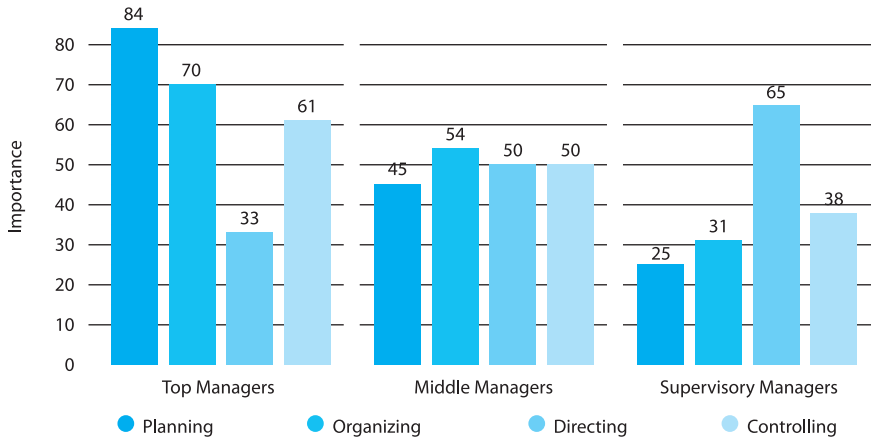
**Managers** are the people who plan, organize, direct, and control so as to manage organizations and organizational units. Managers establish the directions to be pursued, allocate people and resources among tasks, supervise individual, group, and organizational performance, and assess progress toward goals and objectives. To succeed in these functions, they perform specific jobs, use a variety of skills, and fill particular roles.

### Managerial Jobs

Although all managers are responsible for fulfilling the same four functions, not all of them perform exactly the same jobs. Instead, most organizations have three general types of managers: top managers, middle managers, and supervisory managers. Figure 2.4 illustrates the distinctive combination of planning, organizing, directing, and controlling performed by each type of manager.<sup>3</sup>

#### Top Managers

Top managers, who are responsible for managing the entire organization, include individuals with the title of *chairperson*, *president*, *chief executive officer*, *executive vice president*, *vice president*, or *chief operating officer*. Managerial work at this level consists mainly of performing the planning activities needed to develop the organization's mission and strategic goals. Top managers also carry out organizing and controlling activities as determined by strategic planning. As part of the controlling function, they assess the firm's progress toward attainment of its strategic goals by monitoring information about activities both within the firm and in its surrounding environment. Top management's responsibilities include adjusting the organization's overall direction on the basis of information reviewed in the controlling procedures. Because strategic planning, organizing, and controlling require a great deal of time, top managers have little time to spend in directing subordinates' activities. Typically,



**Figure 2.4** Managerial Functions and Types of Managers

Planning is the most important function of top managers. Middle managers fulfill all four management functions about equally. Directing is the most important function of supervisory managers.

they delegate responsibility for such direction to middle managers lower in the hierarchy of authority.

### Middle Managers

Middle managers are usually responsible for managing the performance of a particular organizational unit and for implementing top managers' strategic plans. As they work to transform these strategies into programs that can be implemented at lower levels of the company, middle managers help establish functional or divisional objectives that will guide unit performance toward attainment of the firm's strategic goals. For instance, middle managers in a company's marketing department might transform the strategic goal of attaining control of 35 percent of the company's market into objectives specifying the level of sales to be achieved in each of the company's 12 sales districts. Middle managers are also responsible for ensuring that the managers beneath them implement the unit goals and appropriately direct employees toward their attainment. Terms such as *director* or *manager* are usually a part of a middle manager's title—for example, *director of human resources* or *western regional manager*.

### Supervisory Managers

Supervisory managers, often called *superintendents*, *supervisors*, or *foremen*, are charged with overseeing the nonsupervisory employees who perform the organization's basic work. Of the three types of managers, supervisory managers spend the greatest amount of time actually directing employees. Except for making small, on-the-job adjustments, they seldom perform planning and organizing activities. Instead, supervisory managers initiate the upward flow of information that middle and top managers use to control organizational behavior. They may also distribute many of the rewards or punishments used to influence nonsupervisory employees' behaviors. Their ability to control subordinates' activities is limited, however, to the authority delegated to them by middle management.

## Managerial Skills

Not surprisingly, the skills that managers use to succeed in their jobs are largely determined by the combination of planning, organizing, directing, and controlling functions that they must perform. As shown in Figure 2.5, each level of management has its own skill requirements.<sup>4</sup>

**Conceptual skills** include the ability to perceive an organization or organizational unit as a whole, to understand how its labor is divided into tasks and reintegrated by the pursuit of common goals or objectives, and to recognize important relationships between the organization or unit and the environment that surrounds it. Conceptual skills involve a manager's ability to *think* and are most closely associated with planning and organizing. These skills are used most frequently by top managers, who take responsibility for organization-wide strategic endeavors.

Included in **human skills** is the ability to work effectively as a group member and build cooperation among the members of an organization or unit. Managers with well-developed human skills can create an atmosphere of trust and security in which people can express themselves without fear of punishment or humiliation. Such managers, who are adept at sensing the aspirations, interests, and viewpoints of others, can often foresee others' likely reactions to prospective courses of action. Because all management functions require that managers interact with other employees to acquire information, make decisions, implement changes, and assess results, it is not surprising that top, middle, and supervisory managers all put human skills to use.

**Technical skills** involve understanding the specific knowledge, procedures, and tools required to make the goods or services produced by an organization or unit. For example, members of a company's sales force must have skills in selling. Accountants have bookkeeping or auditing skills. Maintenance mechanics may need to have welding skills. For managers at the top or middle of an organization's hierarchy of authority, who are far removed from day-to-day production activities, technical skills are the least important of the three types of skills to have. Such skills are more critical to the success of supervisory managers overseeing employees who use technical skills in performing their jobs.

## Managerial Roles

Like skill requirements, **managerial roles** vary from one kind of manager to another. Indeed, the same manager may play more than one role at the same time. As shown in Table 2.2, these

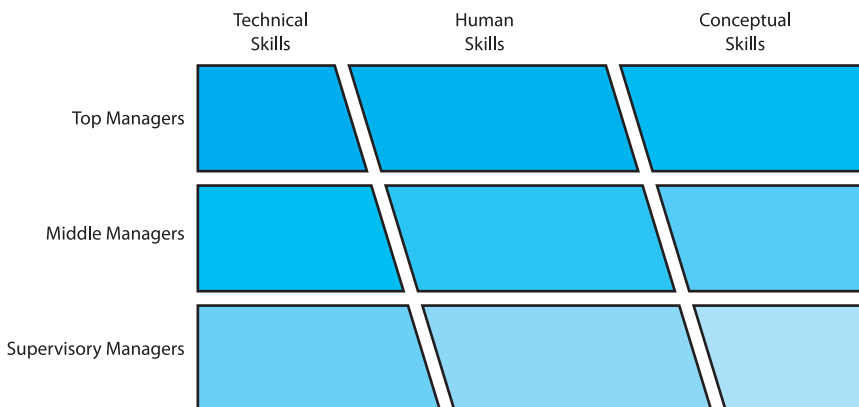


Figure 2.5 Managerial Skills

Table 2.2 Ten Roles of Managers

Role	Description
<i>Interpersonal roles:</i>	
Figurehead	Representing the organization or unit in ceremonial and symbolic activities
Leader	Guiding and motivating employee performance
Liaison	Linking the organization or unit with others
<i>Informational roles:</i>	
Monitor	Scanning the environment for information that can enhance organizational or unit performance
Disseminator	Providing information to subordinates
Spokesperson	Distributing information to people outside the organization or unit
<i>Decisional roles:</i>	
Entrepreneur	Initiating changes that improve the organization or unit
Disturbance handler	Adapting the organization or unit to changing conditions
Resource allocator	Distributing resources within the organization or unit
Negotiator	Bargaining or negotiating to sustain organizational or unit survival

roles cluster together in three general categories: interpersonal, informational, and decisional roles.<sup>5</sup>

### *Interpersonal Roles*

In fulfilling interpersonal roles, managers create and maintain interpersonal relationships to ensure the well-being of their organizations or units. They represent their organizations or units to other people in the *figurehead role*, which can include such ceremonial and symbolic activities as greeting visitors, attending awards banquets, and cutting ribbons to open new facilities. Managers also function as figureheads when they perform public service duties, including such activities as chairing the yearly fund drive for the United Way or serving on the board of the local Urban League. In the *leader role*, they motivate and guide employees by performing such activities as issuing orders, setting performance goals, and training subordinates. Managers create and maintain links between their organizations or units and others in the *liaison role*. For example, a company president may meet with the presidents of other companies at an industry conference.

### *Informational Roles*

Because they serve as the primary authority figures for the organizations or units they supervise, managers have unique access to internal and external information networks. In informational roles they receive and transmit information within these networks. In the *monitor role*, managers scan the environment surrounding their organizations or units, seeking information to enhance performance. Such activities can range from reading periodicals and reports to trading rumors with managers in other firms or units. In the *disseminator role*, managers pass information to subordinates who would otherwise have no access to it. To share information with subordinates, they may hold meetings, write memoranda, make telephone calls, and so forth. In the *spokesperson role*, managers distribute



information to people outside their organizations or units through annual stockholder reports, speeches, memos, and various other means.

### *Decisional Roles*

In decisional roles, managers determine the direction to be taken by their organizations or units. In the *entrepreneur role*, they make decisions about improvements in the organizations or units for which they are responsible. Such decisions often entail initiating change. For example, a manager who hears about a new product opportunity may commit the firm to producing it. She may also delegate the responsibility for managing the resulting project to others. The *disturbance handler role* also requires making change-oriented decisions. Managers acting in this role must often try to adapt to change beyond their personal control. For example, they may have to handle such problems as conflicts among subordinates, the loss of an important customer, or damage to the firm's building or plant.

In the *resource allocator role*, managers decide which resources will be acquired and who will receive them. Such decisions often demand difficult trade-offs. For instance, if a manager decides to acquire personal computers for sales clerks, he may have to deny manufacturing department employees a piece of production equipment. As part of the resource allocation process, priorities may be set, budgets established, and schedules devised. In the *negotiator role*, managers engage in formal bargaining or negotiations to acquire the resources needed for the survival of their organizations or units. For example, they may negotiate with suppliers about delivery dates or bargain with union representatives about employee wages and hours.

### *Differences among Managers*

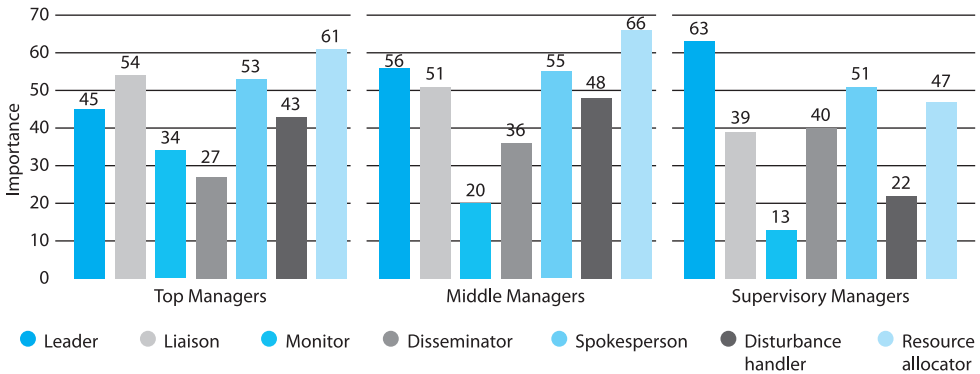
Just as the functions managers perform and the skills they use differ from one managerial job to another, so do the roles managers fill. In Figure 2.6, the roles of liaison, spokesperson, and resource allocator are shown as being most important in the jobs of top managers, reflecting top management's responsibilities for planning, organizing, and controlling the strategic direction of the firm. In addition, monitoring activities are more important for top managers than for other types of managers because they must scan the environment for pertinent information.

For middle managers, the leader, liaison, disturbance handler, and resource allocator roles are the most important. These roles reflect the importance of middle management's job of organizing, directing, and controlling the functional or divisional units of the firm. The role of disseminator is also important in middle managers' jobs, as these managers must explain and implement the strategic plans formulated by top management.

For supervisory managers, the leader role is the most important, as they spend most of their time directing nonsupervisory personnel. They also act as spokespeople who disseminate information within their groups and serve as liaisons who connect their groups with the rest of the organization. In addition, they acquire and distribute the resources that their subordinates need to carry out their jobs.

### **The Nature of Managerial Work**

To further analyze the classification of managerial roles just discussed, Henry Mintzberg observed a group of top managers at work for several weeks. After listing these managers' major activities and monitoring the time it took to perform them, Mintzberg found that the managers spent by far the most time in scheduled meetings. When combined with



**Figure 2.6** Managers' Jobs and the Roles They Fill

When researchers asked top, middle, and supervisory managers about the importance of the roles they perform, their answers provided the data illustrated graphically here. Note that the roles of figurehead, entrepreneur, and negotiator were not included in this survey.

Source: Based on information from A. I. Kraut, P. R. Pedigo, D. D. McKenna, and M. D. Dunnette, "The Role of the Manager: What's Really Important in Different Management Jobs," *Academy of Management Executive* 3 (1989), 286–293.

unscheduled meetings, this activity accounted for almost 70 percent of the managers' time. As Table 2.3 shows, the managers were left with barely a fifth of the day for desk work, and about a tenth for telephone calls and tours—walking around the company to see what was going on.

Mintzberg also recorded the amount of time consumed by each instance of each activity. As indicated in Table 2.3, scheduled meetings averaged a little more than an hour in length and ranged from less than 10 minutes to more than 2 hours. Unscheduled meetings were generally shorter, lasting from a few minutes to about an hour and averaging approximately 12 minutes each. Periods of desk work and tours to inspect the company averaged from 11 to 15 minutes each and were fitted in between scheduled meetings and unscheduled interruptions. Telephone calls were almost always quite short, averaging about 6 minutes each.

Based on his observations, Mintzberg concluded that managers' roles often require them to work in short bursts rather than in long, uninterrupted sessions. Such individuals frequently lack the time to complete rigorous planning, organizing, directing, and controlling. Rather than taking the form of a routine, well-planned course of action, managing can involve making nonroutine *incremental adjustments*.<sup>6</sup> Clearly, managing is a fast-paced, active profession.

**Table 2.3** Distribution of Managerial Activities

Managerial activity	Percentage of workday consumed	Average duration
Scheduled meetings	59%	61 minutes
Desk work	22%	11 minutes
Unscheduled meetings	10%	12 minutes
Telephone calls	6%	6 minutes
Tours	3%	15 minutes

## A Framework of Management Perspectives

Our discussions thus far are based on management thoughts and practices developed all over the world, many of which are thousands of years old. Consider the following:

1. As early as 3000 B.C., the Sumerians formulated missions and goals for government and commercial enterprises.
2. Between 3000 and 1000 B.C., the Egyptians successfully organized the efforts of thousands of workers to build the pyramids.
3. Between 800 B.C. and about A.D. 300, the Romans perfected the use of hierarchical authority.
4. Between A.D. 450 and the late 1400s, Venetian merchants developed commercial laws and invented double-entry bookkeeping.
5. In the early 1500s, Niccolo Machiavelli prepared an analysis of power that is still widely read.
6. At about the same time, the Catholic Church perfected a governance structure built upon the use of standardized procedures.

However, truly modern management practices did not begin to develop until the Industrial Revolution of the 1700s and 1800s. Inventions such as James Watt's steam engine and Eli Whitney's cotton gin created new forms of mass production that made existing modes of organization obsolete. Mass-assembly operations accelerated the pace of production dramatically and required the employment of large numbers of workers, overwhelming the small administrative staffs then employed by most companies. In addition, expertise became important to maintain production equipment, even though managers had little time to develop this expertise themselves. The field of industrial engineering, which first emerged because of the need to invent and improve workplace machinery, began to address the selection, instruction, and coordination of industrial employees. Toward the end of the Industrial Revolution, managers and engineers throughout North America and Europe focused on developing general theories of management.

### 1890–1940: The Scientific Management Perspective

Management theories initially took the form of *management principles* intended to provide managers with practical advice about managing their firms. Most of these principles were written by practicing managers or others closely associated with the management profession. Among the first principles to be widely read were those of the **scientific management perspective**.

All principles of scientific management reflected the idea that through proper management an organization could achieve profitability and survive over the long term in the competitive world of business. Theorists sharing the scientific management perspective devoted their attention to describing proper management and determining the best way to achieve it.

#### *Frederick W. Taylor*

The founder of scientific management, Frederick W. Taylor (1856–1915), developed his principles of scientific management as he rose from the position of laborer to chief engineer at the Midvale Steel Works in Philadelphia, Pennsylvania. These principles, which appear in Table 2.4, focused on increasing the efficiency of the workplace by differentiating

**Table 2.4** Frederick W. Taylor's Principles of Scientific Management

1. Assign all responsibility to managers rather than workers.	Managers should do all the thinking related to the planning and design of work, leaving workers the task of carrying it out.
2. Use scientific methods to determine the one best way of performing each task.	Managers should design each worker's job accordingly, specifying a set of standard methods for completing the task in the right way.
3. Select the person most suited to each job to perform that job.	Managers should match the abilities of each worker to the demands of each job.
4. Train the worker to perform the job correctly.	Managers should train workers to use the standard methods devised for their jobs.
5. Monitor work performance to ensure that specified work procedures are followed correctly and that appropriate results are achieved.	Managers should exercise the control necessary to guarantee that workers under their supervision always perform their jobs in the one best way.
6. Provide further support by planning work assignments and eliminating interruptions.	Managers can help their workers continue to produce at a high level by shielding them from distractions that interfere with job performance.

Source: Based on information presented in F. W. Taylor, *The Principles of Scientific Management* (New York: Norton, 1911), pp. 34–40.

managers from nonsupervisory workers and systematizing the jobs of both types of employees.

According to Taylor, an organization's profitability could be ensured only by finding the "one best way" to perform each job. Managers were charged with teaching workers this technique and implementing a system of rewards and punishments to encourage its use. Taylor reported that he used this approach to improve the productivity of coal shovelers at the Bethlehem Steel Company. As he observed these workers, he discovered that a shovel load of coal could range from 4 to 30 pounds, depending on the density of the coal. By experimenting with a group of workers, Taylor discovered that shovelers could move the most coal in one day without suffering undue fatigue if each load of coal weighed 21 pounds. He then developed a variety of shovels, each of which would hold approximately 21 pounds of coal of a particular density. After Taylor taught workers how to use these shovels, each shoveler's daily yield rose from 16 tons to 59 tons. At the same time, the average wage per worker increased from \$1.15 to \$1.88 per day. Bethlehem Steel was able to reduce the number of shovelers in its yard from about 500 to 150, saving the firm about \$80,000 per year.<sup>7</sup>

Taylor's ideas influenced management around the world. In a 1918 article for the newspaper *Pravda*, the founder of the Russian Communist Party, Vladimir Lenin, recommended that Taylor's scientific management be used throughout the Soviet Union. In the United States, Taylor's principles had such a dramatic effect on management that in 1912 he was called to testify before a special committee of the House of Representatives. Unions and employers both objected to Taylor's idea that employers and employees should share the economic gains of scientific management and wanted Congress to do something about it. Nevertheless, with the newspaper publicity he gained from his appearance, Taylor found even wider support for his ideas and was soon joined in his work by other specialists.

Table 2.5 Therblig Motions

Search	Transport empty	Transport loaded	Inspect
Find	Position	Disassemble	Assemble
Select	Rest	Preposition	Plan
Grasp	Use	Release load	Avoidable delay

### Other Contributors

The husband-and-wife team of Frank (1868–1924) and Lillian (1878–1972) Gilbreth followed in Taylor’s footsteps in pursuing the “one best way” to perform any job. The Gilbreths are probably best known for their invention of *motion study*, a procedure in which jobs are reduced to their most basic movements. Table 2.5 lists some of these basic movements, each of which is called a *therblig* (*Gilbreth* spelled backward without inverting the *th*). The Gilbreths also invented the microchronometer, a clock with a hand capable of measuring time to 1/2000 of a second. Using this instrument, analysts could perform time-and-motion studies to determine the time required by each movement needed to perform a job.

Another contributor to scientific management, Henry Gantt (1861–1919), developed a task-and-bonus wage plan that paid workers a bonus besides their regular wages if they completed their work in an assigned amount of time. Gantt’s plan also provided bonuses for supervisors, determined by the number of subordinates who met deadlines.<sup>8</sup> In addition, Gantt invented the Gantt chart, a bar chart used by managers to compare actual with planned performance.<sup>9</sup> Present-day scheduling methods such as the program evaluation and review technique (PERT) are based on this invention.

Harrington Emerson (1853–1931), a third contributor to scientific management, applied his own list of 12 principles to the railroad industry in the early 1900s.<sup>10</sup> Among Emerson’s principles were recommendations to establish clear objectives, seek advice from competent individuals, manage with justice and fairness, standardize procedures, reduce waste, and reward workers for efficiency. Late in his life, Emerson became interested in the selection and training of employees, stressing the importance of explaining scientific management to employees during their initial training. He reasoned that sound management practices could succeed only if every member of the firm understood them.

### 1900–1950: The Administrative Principles Perspective

At about the same time that Taylor and his colleagues were formulating their principles of scientific management, another group of theorists was developing the **administrative principles perspective**. In contrast to scientific management’s emphasis on reducing the costs of production activities, this perspective focused on increasing the efficiency of administrative procedures.

#### Henri Fayol

Considered the father of modern management thought, Henri Fayol (1841–1925) developed his principles of administration in the early 1900s while serving as chief executive of a French mining and metallurgy firm, Commentry-Fourchambault-Decazeville, known as “Comambault.” Fayol was the first to identify the four functions of management we have already discussed: planning, organizing, directing, and controlling.<sup>11</sup> He also formulated the 14 principles shown in Table 2.6 to help administrators perform their jobs.

Table 2.6 Fayol's 14 Principles of Management

<i>Principle</i>	<i>Description</i>
Division of work	A firm's work should be divided into specialized, simplified tasks. Matching task demands with workforce skills and abilities will improve productivity. The management of work should be separated from its performance.
Authority and responsibility	Authority is the right to give orders, and responsibility is the obligation to accept the consequences of using authority. No one should possess one without having the other as well.
Discipline	Discipline is performing a task with obedience and dedication. It can be expected only when a firm's managers and subordinates agree on the specific behaviors that subordinates will perform.
Unity of command	Each subordinate should receive orders from only one hierarchical superior. The confusion created by having two or more superiors will undermine authority, discipline, order, and stability.
Unity of direction	Each group of activities directed toward the same objective should have only one manager and only one plan.
Individual versus general interests	The interests of individuals and the whole organization must be treated with equal respect. Neither can be allowed to supersede the other.
Remuneration of personnel	The pay received by employees must be fair and satisfactory to both them and the firm. Pay should be distributed in proportion to personal performance, but employees' general welfare must not be threatened by unfair incentive-payment schemes.
Centralization	Centralization is the retention of authority by managers, to be used when managers desire greater control. Decentralization should be used if subordinates' opinions, counsel, and experience are needed.
Scalar chain	The scalar chain is a hierarchical string extending from the uppermost manager to the lowest subordinate. The line of authority follows this chain and is the proper route for organizational communications.
Order	Order, or "everything in its place," should be instilled whenever possible because it reduces wasted materials and efforts. Jobs should be designed and staffed with order in mind.
Equity	Equity means enforcing established rules with a sense of fair play, kindness, and justice. It should be guaranteed by management, as it increases members' loyalty, devotion, and satisfaction.
Stability of tenure	Properly selected employees should be given the time needed to learn and adjust to their jobs. The absence of such stability undermines organizational performance.
Initiative	Staff members should be given the opportunity to think for themselves. This approach improves the distribution of information and adds to the organization's pool of talent.
Esprit de corps	Managers should harmonize the interests of members by resisting the urge to split up successful teams. They should rely on face-to-face communication to detect and correct misunderstandings immediately.

Fayol believed that the number of management principles that might help improve an organization's operation is potentially limitless. He considered his principles to be flexible and adaptable, labeling them principles rather than laws or rules

to avoid any idea of rigidity, as there is nothing rigid or absolute in [management] matters; everything is a question of degree. The same principle is hardly ever applied twice in exactly the same way, because we have to allow for different and changing circumstances, for human beings who are equally different and changeable, and for many other variable elements. The principles, too, are flexible, and can be adapted to meet every need; it is just a question of knowing how to use them.<sup>12</sup>

For Fayol, management involved more than mechanically following rules. It required that managers exercise intuition and engage in skillful behavior in deciding how, when, and why to put management principles into action.

### Max Weber

Max Weber (1864–1920) was a German sociologist who, although neither a manager nor a management consultant, had a major effect on management thought. Like Fayol, he was interested in the efficiency of different kinds of administrative arrangements. To figure out what makes organizations efficient, Weber analyzed the Egyptian Empire, the Prussian army, the Roman Catholic Church, and other large organizations that had functioned efficiently over long periods of time. Based on the results of these analyses, he developed his model of **bureaucracy**, an idealized description of an efficient organization that is summarized in Table 2.7.

Weber's bureaucratic model provides for both the differentiation (through the division of labor and task specialization) and the integration (by the hierarchy of authority and written rules and regulations) necessary to get a specific job done. Weber believed that any organization with bureaucratic characteristics would be efficient. He noted, however, that

**Table 2.7** Features of Bureaucratic Organizations

<i>Feature</i>	<i>Description</i>
Selection and promotion	Expertise is the primary criterion. Friendship criteria or other favoritism is explicitly rejected.
Hierarchy of authority	Superiors have the authority to direct subordinates' actions. They must ensure that these actions serve the bureaucracy's best interests.
Rules and regulations	Unchanging regulations provide the bureaucracy's members with consistent, impartial guidance.
Division of labor	Work is divided into tasks that can be performed by the bureaucracy's members in an efficient, productive manner.
Written documentation	Records provide consistency and a basis for evaluating bureaucratic procedures.
Separate ownership	Members cannot gain unfair or undeserved advantage through ownership.

Source: Based on information presented in H. H. Gerth and C. W. Mills, trans., *From Max Weber: Essays in Sociology* (New York: Oxford University Press, 1946).

work in a bureaucracy could become so simple and undemanding that employees might grow dissatisfied and, as a result, less productive.<sup>13</sup>

### Other Contributors

A number of other management experts have contributed to the administrative principles perspective. James Mooney (1884–1957) was vice president and director of General Motors and president of General Motors Overseas Corporation during the late 1920s, when he espoused his principles of organization.<sup>14</sup> Mooney's *coordinative principle* highlighted the importance of organizing the tasks and functions in a firm into a coordinated whole. He defined coordination as the orderly arrangement of group effort to provide unity of action in the pursuit of a common mission. His *scalar principle* identified the importance of scalar—hierarchical—chains of superiors and subordinates as a means of integrating the work of different employees. Finally, Mooney's *functional principle* stressed the importance of functional differences, such as marketing, manufacturing, and accounting. He noted how work in each functional area both differs from and interlocks with the work of other areas as well as how the success of the larger firm requires coordination and scalar linkages among its different functional parts.

Lyndall Urwick (1891–1983), another contributor to the administrative principles perspective, was a British military officer and director of the International Management Institute in Geneva, Switzerland. Urwick made his mark by consolidating the ideas of Fayol and Mooney with those of Taylor.<sup>15</sup> From Taylor, Urwick adopted the idea that systematic, rigorous investigation should inform and support the management of employees. He also used Fayol's 14 principles to guide managerial planning and control, and Mooney's three principles of organization to structure his discussion of organizing. In this way, Urwick's synthesis bridged Taylor's scientific management and the administrative principles approach, and it integrated the work of others within the framework of the four functions of management identified by Fayol.

Mary Parker Follett (1868–1933), who became interested in industrial management in the 1920s, was among the first proponents of what later became known as *industrial democracy*. In her writings on administrative principles, Follett proposed that every employee should have an ownership interest in his or her company, which would encourage attention to a company's overall mission and goals.<sup>16</sup> In promoting cooperation in the workplace, her work foreshadowed the human relations perspective, which is described next. Follett also suggested that organizational problems tend to resist simple solutions, because they typically stem from a variety of interdependent factors. Here again she anticipated later theorists, contributing to the contingency approach discussed later in this chapter.

### 1930–1970: The Human Relations Perspective

Although members of the scientific management and administrative principles perspectives advocated the scientific study of management, they rarely evaluated their ideas in any formal way. This omission was corrected in the mid-1920s, when university researchers began to use scientific methods to test existing management thought.

#### The Hawthorne Studies

The *Hawthorne studies*, which began in 1924 at Western Electric's Hawthorne plant near Chicago, Illinois, were among the earliest attempts to use scientific techniques to examine



Table 2.8 The Hawthorne Studies

<i>Experiment</i>	<i>Major changes</i>	<i>Results</i>
<i>Stage I:</i>		
Illumination study	Lighting conditions	Improved productivity at nearly all levels of illumination
<i>Stage II:</i>		
First relay-assembly test	Job simplification, shorter work hours, rest breaks, friendly supervision, incentive pay	30 percent productivity improvement
Second relay-assembly test	Incentive pay	12 percent productivity improvement
Mica-splitting test	Shorter work hours, rest breaks, friendly supervision	15 percent productivity improvement
<i>Stage III:</i>		
Interview program	—	Discovery of presence of informal productivity norms
Bank-wiring-room test	Incentive pay	Emergence of productivity norms

human behavior at work.<sup>17</sup> As summarized in Table 2.8, a three-stage series of experiments assessed the effects of varying physical conditions and management practices on workplace efficiency. The first experiment examined the effects of workplace lighting on productivity; it produced the unexpected findings that changes in lighting had little effect but that changes in social conditions seemed to explain significant increases in group productivity. Additional experiments led the researchers to conclude that social factors—in particular, workers’ desires to satisfy needs for companionship and support at work—explained the results observed across all of the Hawthorne studies.

Later reanalyses of the Hawthorne experiments not only found weaknesses in the studies’ methods and techniques, but also suggested that changes in incentive pay, tasks being performed, rest periods, and working hours led to the productivity improvements attributed by researchers to the effects of social factors.<sup>18</sup> Nonetheless, the Hawthorne studies raised serious questions about the efficiency-oriented focus of the scientific management and administrative principles perspectives. In so doing, they stimulated debate about the importance of human satisfaction and personal development at work. The **human relations perspective** of management thought that grew out of this debate redirected attention away from improving efficiency and toward increasing employee growth, development, and satisfaction.<sup>19</sup>

### *Douglas McGregor*

Douglas McGregor (1906–1964) played a key role in promoting this redirection, through his efforts at sharpening the philosophical contrast between the human relations approach and the scientific management and administrative principles perspectives.<sup>20</sup> McGregor used the term **Theory X** to describe his key assumptions about human nature, which appear in Table 2.9. He suggested that theorists and managers holding these assumptions would describe management as follows:

**Table 2.9** Theory X and Theory Y Assumptions*Theory X assumptions:*

1. The average person has an inherent dislike of work and will avoid it if possible.
2. Because they dislike work, most people must be coerced, controlled, directed, or threatened with punishment before they will put forth effort toward the achievement of organizational objectives.
3. The average person prefers to be directed, wishes to avoid responsibility, has relatively little ambition, and desires security above all.

*Theory Y assumptions:*

1. Expanding physical and mental effort at work is as natural as play and rest. The average person does not inherently dislike work.
2. External control and the threat of punishment are not the only way to direct effort toward organizational objectives. People will exercise self-direction and self-control in the service of objectives to which they feel committed.
3. Commitment to objectives is a function of the rewards associated with their achievement. The most significant rewards—the satisfaction of ego and self-actualization needs—can be direct products of effort directed toward organizational objectives.
4. Avoidance of responsibility, lack of ambition, and emphasis on security are not inherent human characteristics. Under proper conditions, the average person learns not only to accept but also to seek responsibility.
5. Imagination, ingenuity, creativity, and the ability to use these qualities to solve organizational problems are widely distributed among people.

Source: Based on information presented in D. McGregor, *The Human Side of Enterprise* (New York: McGraw-Hill, 1960), pp. 33–34, 47–48.

1. Managers are responsible for organizing the elements of productive enterprise—money, materials, equipment, people—solely in the interest of economic efficiency.
2. The manager’s function is to motivate workers, direct their efforts, control their actions, and modify their behavior to fit the organization’s needs.
3. Without such active intervention by managers, people would be passive or even resistant to organizational needs. They must therefore be persuaded, rewarded, and punished for the good of the organization.<sup>21</sup>

According to McGregor, the scientific management and administrative principles perspectives promoted a “hard” version of Theory X. Both perspectives favored overcoming employees’ resistance to organizational needs through strict discipline and economic rewards or punishments. McGregor added that a “soft” version of Theory X seemed to underlie the Hawthorne studies, as the Hawthorne researchers appeared to regard satisfaction and social relations mainly as being rewards for employees who followed orders.

**Theory Y**, a contrasting philosophy of management that McGregor attributed to theorists, researchers, and managers holding the human relations perspective, is based on the second set of assumptions shown in Table 2.9. According to McGregor, individuals holding Theory Y assumptions would view the task of management as follows:

1. Managers are responsible for organizing the elements of productive enterprise—money, materials, equipment, people—in the interest of economic ends.
2. Because people are motivated to perform, have potential for development, can assume responsibility, and are willing to work toward organizational goals, managers are responsible for enabling people to recognize and develop these basic capacities.

3. The essential task of management is to arrange organizational conditions and methods of operation so that working toward organizational objectives is also the best way for people to achieve their own personal goals.<sup>22</sup>

Unlike Theory X managers, who try to control their employees, Theory Y managers try to help employees learn how to manage themselves.

### *Other Contributors*

Many management theorists, including Abraham Maslow and Frederick Herzberg, embraced the point of view embodied in McGregor's Theory Y and speculated about ways in which personal autonomy and group participation might encourage employee growth, development, and satisfaction. The works of these contributors also served as benchmark theories during the early development of research on micro and meso organizational behavior, as described later in this book.

### **1960–Present: The Open Systems Perspective**

With the emergence in the 1960s of the **open systems perspective**, human relations concerns related to employee satisfaction and development broadened to include a focus on organizational growth and survival. According to the open systems perspective, every organization is a *system*—a unified structure of interrelated subsystems—and it is *open*—subject to the influence of the surrounding environment. Together, these two ideas form the central tenet of the open systems approach, which states that organizations whose subsystems can cope with the surrounding environment can continue to do business, whereas organizations whose subsystems cannot cope will not survive.

### *Daniel Katz and Robert L. Kahn*

In one of the seminal works on the open systems perspective, Daniel Katz and Robert Kahn identified the process shown in Figure 2.7 as essential to organizational growth and survival.<sup>23</sup> This process consists of the following sequence of events:

1. Every organization imports *inputs*, such as raw materials, production equipment, human resources, and technical know-how, from the surrounding environment. For instance, Shell Oil Company hires employees and, from sources around the world, acquires unrefined oil, refinery equipment, and knowledge about how to refine petroleum products.
2. Some of the inputs are used to transform other inputs during a process of *throughput*. At Shell, employees use refinery equipment and their own know-how to transform unrefined oil into petroleum products such as gasoline, kerosene, and diesel fuel.
3. The transformed resources are exported as *outputs*—saleable goods or services—to the environment. Petroleum products from Shell's refineries are loaded into tankers and transported to service stations throughout North America.
4. Outputs are exchanged for new inputs, and the cycle repeats. Shell sells its products and uses the resulting revenues to pay its employees and purchase additional oil, equipment, and know-how.

According to Katz and Kahn, organizations will continue to grow and survive only as long

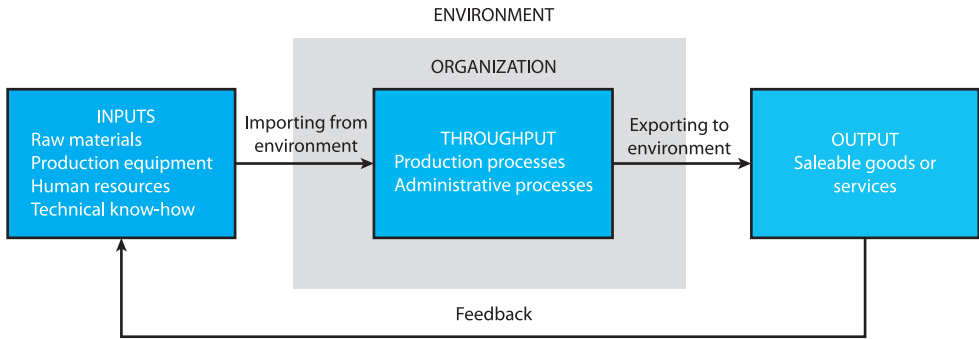


Figure 2.7 The Open Systems Perspective

as they import more material and energy from the environment than they expend in producing the outputs exported back to the environment. *Information inputs* that signal how the environment and organization are functioning can help determine whether the organization will continue to survive. *Negative feedback* indicates a potential for failure and the need to change the way things are being done.

### Fred Emery and Eric Trist

In Katz and Kahn's model, the environment surrounding an organization is both the source of needed resources and the recipient of transformed products. Accordingly, organizational survival depends on sensing that environment and adjusting to its demands. Describing environments and their associated demands so as to improve this sensing and adjustment process was the goal of Fred Emery and Eric Trist, two early theorists of the open systems perspective.<sup>24</sup>

After noting that every organization's environment is itself composed of a collection of more or less interconnected organizations—supplier companies, competitors, and customer firms—Emery and Trist proposed the existence of four basic kinds of environments. The first kind, which they labeled the *placid random environment*, is loosely interconnected and relatively unchanging. Organizations in such environments operate independently of one another, and one firm's decision to change the way it does business has little effect on its rivals. These organizations are usually small—for example, landscape maintenance companies, construction firms, and industrial job shops—and can usually ignore each other and still stay in business by catering to local customers.

*Placid clustered environments* are more tightly interconnected. Under these conditions, firms are grouped together into stable industries. Environments of this sort require organizations to cope with the actions of a *market*—a fairly constant group of suppliers, competitors, and customers. As a result, companies in placid clustered environments develop strategic moves and countermoves that correspond to competitors' actions. Grocery stores in the same geographic region often do business in this type of environment, using coupon discounts, in-store specials, and similar promotions to lure customers away from other stores.

*Disturbed reactive environments* are as tightly interconnected as placid clustered environments, but are considerably less stable. Changes that occur in the environment itself have forceful effects on every organization. For instance, new competitors from overseas, by

increasing automation and changing consumer tastes in the U.S. automobile market, revolutionized the domestic auto industry in the 1970s and 1980s. In response, GM and Ford had to change their way of doing business, Chrysler ultimately merged with Germany's Daimler-Benz to become DaimlerChrysler, and a fourth long-time manufacturer, American Motors, ceased to exist. In such circumstances, organizations must respond not only to competitors' actions but also to changes in the environment itself. Owing to their unpredictability, it is difficult to plan how to respond to these changes.

*Turbulent fields* are extremely complex and dynamic environments. Companies operate in multiple markets. Public and governmental actions can alter the nature of an industry virtually overnight. Technologies advance at lightning speed. The amount of information needed to stay abreast of industrial trends is overwhelming. As a result, it is virtually impossible for organizations to do business in any consistent way. Instead, they must remain flexible in the face of such uncertainty, staying poised to adapt themselves to whatever circumstances unfold. Today's computer and communications industries exemplify this sort of environment. Technological change and corporate mergers are creating and destroying entire categories of companies at ever-increasing rates.

### *Other Contributors*

Emery and Trist suggested that organizations must respond in different ways to different environmental conditions. Tighter environmental interconnections require greater awareness about environmental conditions, and more sweeping environmental change necessitates greater flexibility and adaptability. Other open systems theorists, including Paul Lawrence, Robert Duncan, and Jay Galbraith, have similarly stressed the need for organizations to adjust to their environments. Their ideas, and those of other open systems theorists, form the basis of several current models of macro organizational behavior, described in later chapters of this book.

### **Emerging: The Positive Organizational Behavior Perspective**

As we have noted, the field of organizational behavior is rooted in part in the discipline of psychology. For this reason, changes in psychology have influenced thinking in organizational behavior as the two fields have continued to develop. One such area of cross-fertilization involves the area of "positive psychology." Noting that much of the research conducted in psychology during the last half of the 20th century examined cognitive and behavioral pathologies, that is, negative thoughts and activities, psychologists have recently begun suggesting that more attention be focused on human strengths and potential, thus, on positive psychological processes and outcomes. In introducing a special issue of the *American Psychologist* on the topic of positive psychology, Martin Seligman and Mihaly Csikszentmihalyi described positive psychological results at three levels of operation:<sup>25</sup>

1. The intrapsychic level: well-being, contentment, and satisfaction; hope and optimism; and flow and happiness.
2. The individual level: the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness, originality, future-mindedness, spirituality, high talent, and wisdom.
3. The interpersonal (group) level: the civic virtues and the institutions that move individuals toward better citizenship—responsibility, nurturance, altruism, civility, moderation, tolerance, and work ethic.

Understanding the processes associated with these and similar outcomes, and helping to increase their incidence and prevalence in modern society, is the ultimate aim of positive psychology.<sup>26</sup>

In organizational behavior, the emergence of a “positive organizational behavior” perspective has contributed to renewed interest in and reinterpretation of the basic concepts and models introduced in the four management perspectives that we have just described. Fred Luthans described this emerging perspective as encompassing the study and application of human resource strengths and psychological capacities that can be measured, developed, and managed for performance improvement.<sup>27</sup> Professor Luthans also identified five core areas to be examined in positive organizational behavior, using the acronym CHOSE:<sup>28</sup>

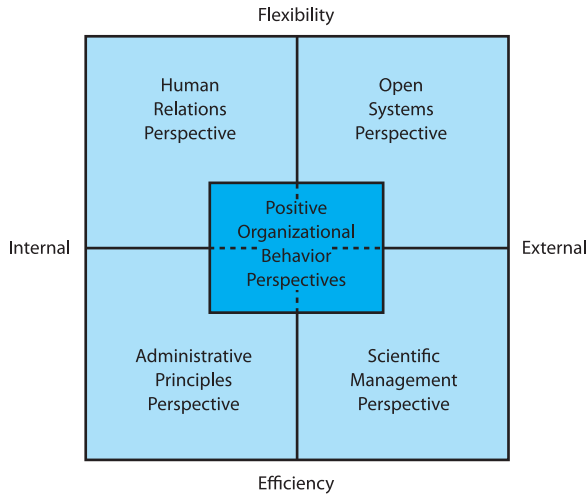
1. Confidence/self-efficacy: one’s belief in being able to succeed at a task in a given situation.
2. Hope: setting goals, determining how to achieve them, and being self-motivated to pursue their accomplishment.
3. Optimism: expecting positive outcomes and perception of positive causes linked to happiness, perseverance, and success.
4. Subjective well-being: positive understanding and evaluation of one’s life, and satisfaction with one’s accomplishments.
5. Emotional adjustment: capacity for recognizing and managing one’s emotions and the emotions of others; self-awareness, empathy, and social skills.

Research in positive organization behavior has examined such varied topics as positive emotions and organizational change, finding positive meaning at work, and virtuous organizing and the performance of members and their organizations.<sup>29</sup> Its promise lies in the greater attention paid to human development within the context of organizations and management practices.

### A Contingency Framework

Of the five management perspectives just described, none tells the whole story about management and managers. Instead, as indicated in Figure 2.8, each contributes valuable insights that supplement the others’ contributions. The scientific management perspective focuses on making a profit in the *external* world by increasing the *efficiency* of production activities. The administrative principles perspective emphasizes improving *internal* operations by increasing the *efficiency* of administration. The human relations perspective stresses the importance of developing the *flexibility* to respond to the individual needs of members *inside* the organization. The open systems perspective focuses on developing the *flexibility* to respond to changes in the *external* environment. The positive organizational behavior perspective represents a refocusing of attention within all four of the quadrants illustrated in the figure toward processes and outcomes that are beneficial to organizations and their members.<sup>30</sup>

Similarities are readily evident among the five perspectives. For example, the scientific management and administrative behavior perspectives both promote attention to efficiency and stability. The human relations and open systems perspectives share a common emphasis on flexibility and change. The administrative principles and human relations perspectives focus on procedures within the organization. The open systems and scientific management perspectives emphasize the importance of dealing with demands on the organization from external sources. The positive organizational behavior perspective bridges these differences and thus unites all of the other perspectives in its examination of beneficial processes and outcomes.



**Figure 2.8** Contingency Framework

The five management perspectives differ in terms of their emphasis on flexibility or efficiency, and on internal operations or the external environment. Depending on the situation faced by a manager, one or more of the perspectives may provide useful guidance. This contingency relationship is summarized in the form of a simple matrix.

Each of the four underlying perspectives also has an opposite, however. The human relations perspective, with its emphasis on human growth and satisfaction, stands in stark contrast to the scientific management perspective's emphasis on employee efficiency and task simplification. The open systems perspective's focus on adapting to environmental circumstances contrasts sharply with the administrative principles perspective's concern with developing stable, internally efficient operations.

These differences reflect dilemmas that managers face every day. Is it more important to stimulate task performance or employee satisfaction? Should the organization be structured to promote efficiency or flexibility? Should jobs be designed to encourage satisfaction or to maximize profitability? We will address these and other issues in the remaining chapters of this book. For now, we conclude our discussion of management and managers by repeating a key idea: *In dealing with management dilemmas, no single approach is either always right or always wrong.* In recommending this approach, we advocate a **contingency approach** to management—the view that no single theory, procedure, or set of rules is applicable to every situation.<sup>31</sup> Managers must make difficult choices, but the insights offered by all four perspectives can help them weigh the alternatives and decide what to do.

## Summary

*Management* is a process of *planning, organizing, directing,* and *controlling* the behavior of others that makes it possible for an *organization* using a *division of labor* and a *hierarchy of authority* to accomplish a *mission* that would not be achievable through the efforts of individuals working alone. *Managers* differ in terms of where they fit in the organization's hierarchy. These differences influence their use of *conceptual, human,* and *technical skills* and shape the *managerial roles* they fill. The fast-paced job of manager allows little uninterrupted time to devote to any single activity.

Over the years, four perspectives have developed to explain and improve management practices. Supporters of the *scientific management perspective* have tried to increase the efficiency of production processes so as to enhance marketplace profitability. Proponents of the *administrative principles perspective* have focused on enhancing the efficiency of administrative procedures. Researchers in the *human relations perspective* have emphasized nurturing the growth and satisfaction of organization members. Theorists working in the *open systems perspective* have highlighted the importance of coping with the surrounding environment. According to the *contingency approach*, these four perspectives form a framework of alternative ways to view the process of management. This framework provides managers with useful guidance as they manage organizational behavior.

## Review Questions

1. How does an organization enable its members to accomplish a goal that might not be achievable by individuals working alone? Why aren't organizations formed to achieve purposes that people can accomplish individually?
2. What is an organization's mission? Its division of labor? Its hierarchy of authority? How do these three organizational attributes fit together to define the nature of management?
3. What are the two key ideas underlying the open systems perspective? What central principle do they support? Explain the cycle of events described by Katz and Kahn's open systems model. Why is it important for managers to be able to diagnose environmental conditions and adapt their organizations to environmental changes as they occur?
4. Explain the contingency model constructed from the five perspectives of management thought described in this chapter. If you were a manager having problems with employee satisfaction, which perspective would you consult for advice? If you were concerned about efficiency, which perspectives could probably help you?





Part II

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# Micro Organizational Behavior

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# Managing Diversity and Individual Differences

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During his presidential campaign in 2008, Barack Obama noted that his first name, Barack, was given to him by his mother, and that his middle name, Hussein, was “given to me by someone who never thought I would run for president.” Although this was meant to be a joke, it reflected the fact that many of his competitors were trying to play into stereotypes that voters might have regarding Arabs and Muslims by emphasizing his middle name at every opportunity.<sup>1</sup> A **stereotype** presumes that some person possesses certain individual characteristics based on their sex or membership in a racial, ethnic, or age group. That is, someone might assume that Muslims or women or older workers are “all alike.” They then employ these prejudicial misperceptions in making decisions that unfairly harm members of these groups and limit organizational effectiveness.

For example, a manager may mistakenly assume that all Muslims are violent fanatics, and then take steps to remove them from the organization in order to promote security. This has actually happened in a number of cases in the airline industry and has led to a great deal of human suffering and numerous discrimination suits.<sup>2</sup> In a different context dealing with gender, Wal-Mart was found to have discriminated against women, and had to pay more than \$1 billion in back pay and punitive damages.<sup>3</sup> As we will see, there is wide variation in abilities and traits within groups and these differences are often much more important than the sometimes trivial differences between groups (Arabs versus Hispanics versus African Americans). Managers who fail to pay attention to differences between people *within these groups* inevitably damage their employees, their companies, and their own careers.

Although stereotyping is one major problem, a different but equally important perceptual distortion is the **mirror image fallacy**, where one presumes that all other people are “just like me.” In one sense, this is a comforting bias because, if it were true, it would make managing people very easy. If owners of a firm believe that everyone in their company shares their abilities, interests, beliefs, and values, they will consider it an easy task to organize and encourage their employees to pursue a common goal. Because the mirror image fallacy *is* a fallacy, however, the owners soon find that the myriad differences among the people they employ will make their task far from easy. For example, while few readers of this book would ever commit fraud or acts of violence, this does not mean that you may not come in contact with others who cannot be trusted. Organizations that conduct background checks as part of the hiring process find applicants who routinely lie about their past employment or conviction record.<sup>4</sup> Because of this, managers need to take steps to ensure that those they hire can contribute to the organization and not place the group at risk.

Ralph Waldo Emerson once wrote that “the wise man shows his wisdom in separation, in gradation, and his scale of creatures and of merits is as wide as nature. . . . The foolish have no

range in their scale, but suppose that every man is as every other man.” That statement captures the essence of this chapter. It seeks to familiarize you with some of the major occupationally relevant dimensions on which humans vary and to describe the means by which you can use this information to promote human welfare and secure a competitive advantage for your organization. The first section of the chapter discusses how information about individual differences can be used to generate added value and competitive advantage. Next, we describe some of the critical dimensions on which people vary. Although these dimensions are hardly the *only* ways in which people can vary (indeed, later chapters will explore others), they serve as a useful starting point for considering the bases of diversity. A manager needs to treat each person as a unique configuration of these characteristics rather than simply categorizing workers by surface characteristics such as race, sex, age, or culture or assuming they are all alike. Managers who think in terms of these characteristics will be able to capitalize on individual differences in a way that promotes the competitiveness of their organizations, while at the same time avoiding prejudicial stereotypes and the mirror image fallacy.

### Capitalizing on Individual Differences

Even the most tolerant manager might sometimes wish that individual differences would just go away. If all supervisors, colleagues, and subordinates were alike, managing would be a much easier task. Of course, such homogeneity is highly unlikely to happen. Consequently, successful organizations must try to capitalize on differences in a way that advances their competitiveness. Indeed, research on how firms gain sustainable competitive advantage consistently identifies selectivity in hiring and an emphasis on training as two central characteristics of successful companies.<sup>5</sup> The findings from this research are supported by the practices of highly successful managers who immerse themselves in the process of selecting new organizational members. For example, Larry Bossidy, the former chairman of Honeywell, was famous for his ability to turn around floundering organizations. He attributed much of his success to hiring the right people, and devoted 30 to 40 percent of his time to hiring and developing future leaders of the organization. Bossidy notes, “I personally interviewed many of the 300 new MBAs we hired. I knew that the standard I set would be followed by the rest of the organization: You hire a talented person, and they will hire a talented person.”<sup>6</sup> As shown in Figure 3.1, we can derive benefits from individual differences in organizational behavior through selection, training, and reengineering.

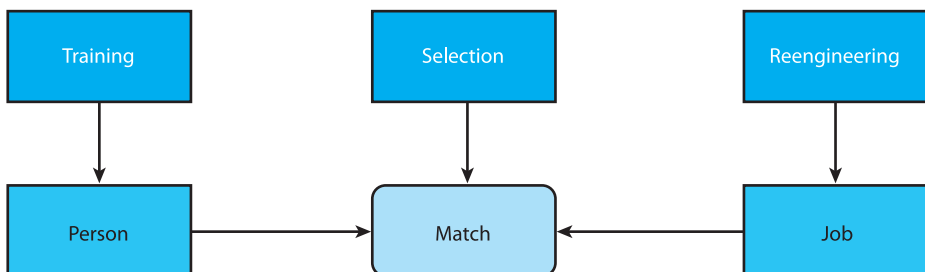


Figure 3.1 Three Ways to Capitalize on Individual Differences

## Selection

Selection programs enable managers to assess people and jobs, and then try to match up the two in a way that maximizes the fit between the abilities and traits of the individual and the abilities and traits required for the job. This type of matching allows us to take advantage of individual differences without changing either the person or the job. Personnel selection is the process of choosing some applicants and rejecting others for particular positions.

Personnel selection programs often begin with an analysis of the job, which leads to a written job description, which in turn leads to a list of the various characteristics needed for someone who is likely to be successful in that job. In other cases, jobs may be highly fluid and quick to change, and thus the hiring organization may try to find people who fit with the culture of the organization rather than some specific job.<sup>7</sup> In yet other cases, the organization itself may be going through changes and may simply be looking for a proactive individual who can adapt to a wide variety of different job situations.<sup>8</sup> Regardless, in the end, as one hiring manager notes, “the idea is to define what success looks like for the position you are filling because this helps you determine what questions to ask during the interview and how to screen the applicants.”<sup>9</sup>

Once one has laid out the requirements that are critical for success, the next step is to collect information on job applicants. Although almost all organizations rely on some form of interviewing to assess people, it is critical that interviews are structured and that interviewers take notes in order to create a standardized set of questioning and recording of answers. Situational interview questions that require applicants to “think on their feet” with respect to what they would do in critical situations that are likely to come up on the job are often helpful for predicting future behavior. Subjectivity and potential bias can also be reduced by relying on multiple interviewers or standard paper-and-pencil tests or measures. The key is relying on multiple sources and multiple methods when collecting information, because each source or method has its own limitations. For example, although background checks by outside agents are useful, they are not always accurate, and they are no substitutes for a face-to-face interactive exchange with job applicants.<sup>10</sup> In the end, it is critical to see which sources and which measures taken prior to hiring people actually predict the future in terms of work performance and turnover, a process called **test validation**.

## Training

A second way to benefit from knowledge of individual differences is to train people so as to compensate for any job-related deficiencies in their current profile of traits or abilities. The beginning of the 21st century has been marked by widespread labor shortages in some U.S. industries. Much of this problem can be traced not so much to the scarcity of workers, but rather to shortcomings in the skill levels of those workers who are available. For example, according to surveys conducted by the National Association of Manufacturers, five of six applicants for manufacturing jobs are currently rejected because of gaps between their skills and the job requirements. Of those rejected, two out of five are rejected specifically for lack of basic proficiency in reading and arithmetic.<sup>11</sup> In fact, research has documented that the illiteracy rates associated with the growing segments of the U.S. labor market (young people and immigrants) are among the highest among industrialized nations.<sup>12</sup>

In other cases, rather than a problem with basic skills, labor shortages can be traced to people who lack specific higher-level skills where the demand outstrips the supply. Rather than trying to compete in the open market in these areas by paying higher wages (and hence rack up higher costs) some employers try to increase the skill levels of current workers via

training programs. For example, Caterpillar, a major manufacturer and dealer of farming equipment, faced a shortage of mechanical engineers. In order to staff its dealerships, it set up a network of vocational schools in six different countries, where lower-level workers who passed a standardized curriculum are guaranteed higher-level jobs in the company.<sup>13</sup>

Of course, training and selection are not mutually exclusive ways of leveraging individual differences. Many organizations find that some people respond better to training initiatives than others, and thus they go out of their way to make sure the people they select in the first place are those who are likely to derive the most out of learning experiences. For example, research shows that people who are high in general intelligence or cognitive ability derive more benefit from training experiences, and so organizations might screen on this characteristic if they engage in a great deal of training.<sup>14</sup>

### Reengineering

Assessing individual differences is clearly critical for training purposes, because the intent is to change the person. A different approach is to assess individual differences and then respond to any mismatch between person and job by changing the *job* or reengineering work processes. For example, the Americans with Disabilities Act (ADA) requires that employers make “reasonable accommodations” in an effort to employ the disabled. Such accommodations often mean deleting, changing, or moving a job requirement to a different job, so that the lack of a particular ability no longer disqualifies some disabled worker from being considered for a certain position.<sup>15</sup> For example, Nordstrom’s, working in conjunction with the United Cerebral Palsy Association, attempted to isolate all the tasks in its job descriptions that can be performed by someone with cerebral palsy. These tasks (such as sorting hangers) are then removed from the job, freeing up the original worker to do other things, and given to a worker who has cerebral palsy. The program provides Nordstrom’s with a means of incorporating people with disabilities into the workforce in a meaningful and productive way.<sup>16</sup>

Older workers are another source of valuable talent that sometimes requires reengineered jobs. For example, in the oil industry, there is a serious shortage of petroleum engineers. In order to retain an older workforce whose valuable skills would be difficult to replace, many companies like ConocoPhillips are reengineering the work to make it less physically demanding. The hope is to stretch out the careers of a set of people who might otherwise retire. Indeed, as one industry expert noted, “this is a graying profession and we are just not ready for the transition.”<sup>17</sup> This is not an isolated example, and the Bureau of Labor Statistics data from 2007 suggests that workers in the 65–69 age range have shown the highest growth in labor force demand in the last five years. Thomas Darrow, a major corporate recruiter, has noted that “this is evolving to one of the biggest trends in recruiting” and employers are scrambling to make accommodations in work design to attract and retain older workers.<sup>18</sup>

Just as research on training has shown that certain people benefit more from training than others, research also suggests that some people respond better to the redesign of work than others. For example, people who are psychologically flexible and open to experience are also more trainable, and this can be built into selection programs that rely heavily on work redesign initiatives to stay competitive.<sup>19</sup> Thus, work redesign is a useful complement to both selective hiring and training when it comes to deriving competitive advantage from individual differences.

## Diversity in Physical Ability

Recent research on individual differences has tended to focus on cognitive abilities and personality traits, and the bulk of this chapter will also focus on human variation on these dimensions. However, a great deal of the early research in the area of organizational behavior examined individual differences in physical abilities. Occupation-oriented studies, taken together with human physiology studies, provide us with a solid foundation for understanding the structure of physical performance (Table 3.1).<sup>20</sup>

As noted in Table 3.1, physical ability consists of three major dimensions: muscular strength, endurance, and movement quality. Muscular strength comes in three slightly different varieties (tension, power, and endurance); the same is true for movement quality (flexibility, balance, and coordination).

Although a thorough analysis of a job is needed to determine whether it requires a particular physical capacity, the abilities listed in Table 3.1 tend to be needed most frequently in two types of jobs: the protective services, such as police departments, fire departments, and correctional facilities; and construction and other physically demanding industries. If personnel in these industries lack the necessary physical abilities, they or the people they seek to protect may be injured.<sup>21</sup>

In jobs that are physically demanding, testing for these kinds of physical abilities is much more common now than in the past for several reasons. First, height and weight criteria were often substituted for specific abilities in the past, but because height and weight measures are considered to discriminate unfairly against women and members of some minority groups, they are rarely used today. Although there tend to be significant differences between men and women on direct measures of physical strength, when one measures endurance or movement quality directly there are few differences between men and women.<sup>22</sup> Second, because of increasingly sedentary lifestyles, in general, the physical abilities of the average person have eroded over time, and hence one can no longer take this for granted when hiring people for physically demanding jobs.<sup>23</sup>

Physical ability tests are also used to select employees for work such as construction, where jobs require both physical strength and agility. Such tests can predict not only a person's level of job performance, but also his or her risk of job-related injuries. This finding is significant because, as many employers pick up the bill for employees' medical costs, tests that predict health problems for a job applicant can prove extremely cost-effective.

**Table 3.1** The Three Dimensions of Physical Ability

1. Muscular strength	Ability to exert muscular force against objects in terms of pushing, pulling, lifting, carrying, or lowering them (muscular tension) Exerting muscular force in quick bursts (muscular power) Exerting muscular force continuously over time while resisting fatigue (muscular endurance)
2. Endurance	Ability to sustain physical activity that results in increased heart rates for a long period
3. Movement quality	Ability to flex and extend body limbs to work in awkward or contorted positions (flexibility) Ability to maintain the body in a stable position and resist forces that cause loss of stability (balance) Ability to sequence movement of the fingers, arms, legs, or body to result in skilled action (coordination)



## Diversity in Cognitive Ability

Although mental abilities are not one-dimensional, we do generally find positive relationships between people's performances on different kinds of mental tests. To emphasize the positive relationships among the facets of mental ability while still recognizing their unique features, we will discuss each aspect separately. First we will focus on the three traditional aspects of cognitive ability, and then follow this with two newer dimensions that have received a great deal of interest.

### Traditional Dimensions of Cognitive Ability

Because scores across different types of mental tests are related, they are often summed and treated as an index of general intelligence. Specialists tend to prefer the term **general cognitive ability** to *intelligence*, because the former term is more precise, and because it conjures up less controversy over such issues as the role of genetic factors in mental ability. The term *intelligence* is used imprecisely in the lay community, where the high social value placed on it complicates discussions of things such as age, sex, and racial differences, as well as the means to reduce the impact of such differences.<sup>24</sup>

Although cognitive abilities all share some features, some facets of mental ability are sufficiently distinctive so that they are worth assessing in their own right. Because specific jobs may require more of one type of mental ability than of the other types, we may want to home in on gathering data on this particular ability. In this section, we will focus our attention on five facets of cognitive or mental ability that stand out in terms of both their generality and their usefulness as predictors of performance in the real world. Table 3.2 defines these abilities.

The first three dimensions are probably the most familiar to college students who have taken many standardized tests throughout their academic careers. **Verbal ability** reflects the degree to which a person can understand and use written and spoken language. **Quantitative ability** reflects a person's ability to perform all kinds of arithmetic problems—not only problems dealing with addition, subtraction, multiplication, and division, but also those involving square roots, rounding procedures, and the multiplication of positive and negative values.

**Table 3.2** Dimensions of Cognitive Ability

1. Verbal ability	The ability to understand and effectively use written and spoken language
2. Quantitative ability	The ability to quickly and accurately solve arithmetic problems of all kinds, including addition, subtraction, multiplication, and division, as well as applying mathematical rules
3. Reasoning ability	The ability to think inductively and deductively to invent solutions to novel problems
4. Emotional intelligence	The ability to generate, recognize, express, understand, and evaluate one's own and others' emotions in order to successfully cope with social demands and pressures
5. Cultural intelligence	The ability to observe, interpret, and act upon unfamiliar social and cultural cues and function effectively in new and foreign environments

A different kind of analytical skill is associated with the third dimension of mental ability. **Reasoning ability** is the ability to invent solutions to many different types of problems. Although tests of reasoning ability sometimes employ numbers, they should not be confused with simple measures of quantitative ability. At the heart of a reasoning problem is the need to create a solution or grasp a principle, not a need to make computations.

The usefulness of traditional cognitive ability tests in predicting task performance has been investigated in both academic and organizational contexts. In academic settings, researchers have found high correlations between tests like the Scholastic Aptitude Test (SAT) and both a person's first-year-college grade-point average (correlations in the .50s) and his or her overall class rank (correlations in the .60s).<sup>25</sup> The predictive value of these tests is greater for students in the physical sciences or math than it is for students in the humanities or social sciences. The tests are less predictive of success in graduate school (correlations in the .30s), because most applicants for graduate school score relatively high in mental ability and therefore represent a somewhat homogeneous group.

A great deal of evidence suggests that general cognitive ability is also predictive of success in the work world.<sup>26</sup> Research has shown that, in virtually any job where planning, judgment, and memory are used in day-to-day performance, individuals high in general cognitive ability will generally outperform those who are low in this ability.

General cognitive ability is important even for jobs that lack such complexity if these positions expose one to dangerous conditions, and workers who are high in cognitive ability show much lower on-the-job accident rates.<sup>27</sup> In addition, cognitive ability is important on any job that requires the worker to learn something new. Individuals who are high in general cognitive ability will learn the job more quickly than their low-ability counterparts.<sup>28</sup> Finally, individuals who are high in cognitive ability have also been found to engage in less counter-productive behaviors at work, including destruction of property and engaging in violent acts on the job.<sup>29</sup> Thus, general cognitive ability is important in organizations for a whole host of reasons, and indeed this may be the single most important individual difference variable in work contexts.

For certain jobs, tests of specific mental ability can add significantly to the predictive power of tests of general intelligence.<sup>30</sup> For example, verbal ability and reasoning ability are critical to success in executive, administrative, and professional positions. Quantitative ability is important in jobs such as accountant, payroll clerk, and salesperson and in many types of supervisory positions. Whereas general mental ability tests have relevance for a wide variety of jobs, specific mental ability tests are useful for more job-specific evaluations.

### **New Dimensions of Cognitive Ability**

In addition to these standard measures of cognitive ability, recent research has also been directed at developing a construct that is referred to as **emotional intelligence**. Emotional intelligence has been defined as a set of abilities, both verbal and non-verbal, that enable a person to generate, recognize, express, understand, and evaluate their own and others' emotions in order to successfully cope with social demands and pressures.<sup>31</sup> People who are high on emotional intelligence have the ability to identify distinct emotions in themselves, as well as other people, and use this to guide their thinking and actions. This helps them regulate their own moods and manage the emotions of other people who surround them. Like other specific aspects of mental ability, emotional intelligence is correlated modestly, but significantly, with general cognitive ability. Still, the evidence seems to suggest that this variable has unique predictive value in predicting success in jobs that involve interpersonal interaction over

and above general cognitive ability and personality traits like those captured by the five factor model.<sup>32</sup>

Initial treatments of the concept of emotional intelligence conceived of it as an ability, but the concept was quickly picked up in the popular press literature and took on a life of its own, leading to the springing up of a cottage industry of books and seminars on the topic. Many of these treatments strayed from the original conception and increasingly portrayed it as an exceedingly broad personality-like trait, resulting in a great deal of criticism aimed at the construct in general in the academic literature.<sup>33</sup> However, research that has employed the more narrow, ability-oriented treatment has documented that leaders and managers who score high on this ability tend to be perceived as more effective by their subordinates, peers, and supervisors.<sup>34</sup> Perhaps because of this social effectiveness, high scorers on this ability also tend to show generally higher levels of personal well-being, self-esteem, and life satisfaction.<sup>35</sup>

Just as the perceived need for the concept of emotional intelligence grew out of a general belief that the standard measures of cognitive ability failed to capture all the critical abilities needed for success in contemporary organizations, so too did the concept of **cultural intelligence**. Cultural intelligence has been defined as the ability to observe, interpret, and act upon unfamiliar social and cultural cues and function effectively in new and foreign environments.<sup>36</sup> This includes a cognitive component associated with scanning one's environment and recognizing patterns within cultures, a motivational component that derives satisfaction from adjusting to new situations, and finally a behavioral component that emphasizes practicing new behaviors and developing new habits. Although this ability is related to certain aspects of personality, especially openness to experience, as with emotional intelligence this characteristic is best thought of as ability and not a personality trait.<sup>37</sup>

Cultural intelligence is a critical individual difference for organizations that are trying to move into global product markets. For example, Starbucks Coffee brings employees from China to its training facilities in Tacoma, Washington, to teach them the secrets of brewing dozens of exotic coffees and to indoctrinate them in Starbucks' unique corporate culture. The Chinese workers, in turn, educate Starbucks management about some of the idiosyncratic aspects of Chinese culture that this company needs to respect as it launches its new joint venture into the Chinese marketplace.<sup>38</sup>

Although one can learn a little about different cultures from reading a book or tourism in general, the behavioral component of cultural intelligence also demands gaining experience working in the novel culture, not going there on a vacation.<sup>39</sup> Many organizations attempt to broaden the cultural experience of their current employees by sending them on international assignments. One survey of nearly 200 multinational corporations found that more than half of these organizations had as many as 50 top-level managers on expatriate assignments and that this number was expected to grow over time.<sup>40</sup> Many managers struggle with this experience and terminate their assignments early, especially employees who are low in agreeableness, emotional stability, and extroversion.<sup>41</sup>

In addition to competing in product markets, because of the labor shortage that has marked the beginning of the 21st century, firms have moved into international labor markets to bring in the type of talent they need to compete both domestically and abroad.<sup>42</sup> One aspect of this trend can be seen in the high-skill end of the economy, where U.S. organizations have been forced to search more widely for skilled technicians, engineers, and computer programmers. For example, Central Europe has seen a mass exodus of talent out of the region as companies located elsewhere in Europe or in North America increasingly raid this region for skilled workers. In Romania alone, an estimated 2.5 million high-skill workers have left the country for more lucrative opportunities abroad.<sup>43</sup>

At the low end of the skill range, an influx of international workers has also entered the United States to perform low-paying jobs that most Americans are unwilling to do—for example, dishwashers, hotel maids, janitors, and construction workers.<sup>44</sup> This labor shortage is especially acute in the summer months, because American teens have recently been avoiding the traditional low-skill summer jobs in amusement parks and other recreational areas. As Gene Kijowski, president of Century Pool Management, notes, “There is so much affluence in this whole region, it is hard to find young people who want to hustle.” Indeed, to stay in business, Century Pool had to bring in 100 teenagers from Prague to work as lifeguards.<sup>45</sup> Likewise, across the United States a large segment of the workforce at amusement parks and recreational areas now comes from Eastern and Central Europe.<sup>46</sup> Although there have been failed legislative attempts aimed at curtailing the inevitable flow of human ability across borders,<sup>47</sup> the real barrier to effectively integrating this talent is the cultural differences between people, as manifested in different personalities and working styles.

## Diversity in Personality

Given the vast number of personality characteristics that are described in the popular press, as well as the scientific literature, we need some type of classification scheme before we can understand both the most important individual differences in traits. Fortunately, a great deal of research has been conducted on the dimensionality of personality, which has helped clarify the structure of human traits. Indeed, the current personality literature tends to focus on a consensus group of five dimensions of personality, known as the “Big Five,” and occupationally relevant measures of these characteristics have been developed.<sup>48</sup>

### The Big Five Framework

The Big Five personality characteristics focus on a person’s social reputation, in the sense that they describe what the person is like when viewed by other people. The five characteristics (Table 3.3) can be used to comprehensively capture what people are like. Because work organizations are social institutions, the fact that these characteristics are expressed in terms of a person’s social reputation makes them highly relevant in understanding organizational behavior. The Big Five traits include **extroversion**, **emotional stability**, **agreeableness**, **conscientiousness**, and **openness to experience**.<sup>49</sup>

Many companies, including General Motors, American Cyanamid, JCPenney, and Westinghouse, rely heavily on personality assessment programs to evaluate and promote employees. Many other firms use such programs as screens for initial hiring.<sup>50</sup> Despite their widespread adoption by industry, however, the usefulness of such personality measures in explaining and predicting human behavior has been criticized on several counts. Traditionally,

**Table 3.3** Dimensions of Personality

1. Extroversion	Sociable, gregarious, assertive, talkative, expressive
2. Emotional adjustment	Emotionally stable, nondepressed, secure, content
3. Agreeableness	Courteous, trusting, good-natured, tolerant, cooperative, forgiving
4. Conscientiousness	Dependable, organized, persevering, thorough, achievement oriented
5. Openness to experience	Curious, imaginative, artistic, sensitive, broad-minded, playful

the most significant criticism deals with the validity of these measures for actually predicting future job success. Although it is possible to find reliable, commercially available measures of each of the traits shown in Table 3.3, some have suggested that the evidence for their validity and generalizability has traditionally been only mixed.<sup>51</sup> Conscientiousness is the only dimension of personality that seems to display any validity across a number of different facets of the trait, as well as across different job categories.<sup>52</sup> Conscientiousness is an especially strong predictor of job performance when employees work unsupervised.<sup>53</sup> It also appears to be a strong determinant of entrepreneurial status.<sup>54</sup> Extroversion is relevant to jobs such as those involving sales and social influence.<sup>55</sup> In addition, the positive effects for extroversion tend to be neutralized if the person is also low on other traits such as emotional stability.<sup>56</sup>

Because of the social nature of many of these traits and because companies are increasingly competing on the dimension of quality of service, the importance of the personalities of the people who provide that service has never been more important. These customer-contact people make up one of the fastest-growing segments of the U.S. workforce, and they serve at the frontline in the battle among organizations striving for competitive advantage. Many of the most successful firms therefore take great care when hiring people for these jobs.

For example, at Marriott Hotels, applicants take a computerized, self-administered questionnaire as part of the hiring process. The items on this questionnaire tap into dimensions such as conscientiousness and agreeableness. Marriott rejects 90 percent of all would-be guest service associates based on these kinds of tests and interviews, and this selectivity enhances the level of its service quality. Manager Richard Bell-Irvine notes, “When someone leaves, it messes up your employee teams, messes up your productivity, and messes up the service you provide.” Whereas nearly 50 percent of Marriott’s new employees once left after their first three months on the job, this sort of testing has cut the attrition rate to closer to 10 percent. Another Marriott manager, Chris Kerbow, notes, “We’re willing to be patient. It’s so critical to the success of the hotels that our associates be committed and enthusiastic.”<sup>57</sup>

The fact that many personality characteristics are described in everyday language—for example, aggressiveness, sociability, and impulsiveness—is both good news and bad news for the study of organizational behavior. It is good news because most people can readily perceive individual differences in these qualities and can see how such variations might affect particular situations. It is bad news because terms adopted from everyday language are usually imprecise. This vagueness can create considerable difficulty in understanding, communicating, and using information obtained from scientific measures of personality. We will next focus on ways to increase the usefulness of measuring these characteristics in organizational contexts.

### **Making Personality Tests More Effective**

Although the validity of personality tests may never exceed that of cognitive ability tests, organizations can nevertheless take concrete steps to more successfully capitalize on individual differences in personality. First, in many cases, the effects of some trait on performance are revealed only when the person is also high in ability. That is, it is not so much the trait itself, but rather how the trait interacts with ability. For example, in a study of 203 workers at Weyerhaeuser, researchers found little correlation between conscientiousness and supervisory ratings of performance. However, for workers who were high in cognitive ability, there was a strong positive relationship between this aspect of personality and performance.<sup>58</sup> Thus, conscientiousness, in the absence of ability, is not much of an asset, but, when conscientiousness and ability both reside in the same person, the results can be dramatic.

Second, any one trait by itself may not be as important as how the trait interacts with other traits. For example, although it is important for workers to be high in conscientiousness, some people who are high on this trait can be abrasive and interpersonally difficult. Thus, the relationship between conscientiousness and performance—especially when measured by supervisory ratings—might be particularly high when the highly conscientious person is also high on agreeableness. This is the precise finding of a recent study conducted in five different samples of workers across a wide variety of occupations.<sup>59</sup>

Third, the relationship between the trait and performance could be a function of the specific demands of the job. Again turning to agreeableness, although it is nice to be around co-workers who are trusting, tolerant, and cooperative, the nature of some jobs demands just the opposite approach. For example, David Duncan, an auditor for Arthur Andersen, was arrested for his part in the Enron disaster. Duncan's job was to monitor Enron's accounting practices to make sure they conformed to the rules laid down by Arthur Andersen. However, many who know him well attribute his downfall to the fact that he was an overly agreeable person who hated conflict and would do anything to keep his clients happy. In fact, he not only avoided conflict with his clients by approving some very questionable practices, but he even avoided conflict with his co-workers who disapproved of Enron's practices. In fact, in a memo that proved significant in his trial, he responded to a concerned co-worker by noting "on your point (i.e., the whole thing is a bad idea), I really couldn't agree more."<sup>60</sup> In this instance, being trusting, tolerant, and cooperative ran counter to actually getting the job done.

Fourth, the relationship between the trait and performance may be a function of whether the job is stable or unstable. For example, many jobs experience changes in technology that radically alter the nature of the work on a routine basis. This may weaken the ability of some traits to manifest consistent relationships with performance. On the other hand, this kind of dynamic environment enhances the role played by a trait such as openness to experience. Indeed, research has shown that, in contexts where new technologies are being introduced, people who are high in openness perform much better than those who are low in this characteristic.<sup>61</sup>

Fifth, obtaining information about the job applicant's personality is also an area where one can take steps to improve the predictive validity of such tests. Unstructured interviews conducted by untrained personnel are unlikely to provide much in the way of valuable information about someone's personality. Standardized paper-and-pencil tests are available for most traits and, although some fear that people will "fake" their responses to these inventories, the evidence suggests that faking is not a large problem in most real-world contexts.<sup>62</sup> In addition, research suggests that structured interviews constructed in the form of situational interviews and judgment tests can often provide much more useful information when making hiring decisions based on personality and interpersonal skills.<sup>63</sup> With a situational interview, applicants are asked to relate either how they would respond to hypothetical events that are likely to occur on the job or actual past experiences they had responding to similar issues in prior jobs. Trained evaluators, often armed with standardized grading forms, then rate the answers provided in terms of what they suggest about the person's personality traits or interpersonal skills. Because of the vast amount of research evidence supporting the validity of situational judgment tests, these are quickly supplanting the use of traditional, unstructured interviews in most organizational hiring contexts.<sup>64</sup>

Finally, most traditional treatments of individual differences have relied on static conceptions of these traits, with the idea that firms will match people to their work and co-workers. More recent research on individual differences, however, has examined individuals' abilities to display adaptability in their behavior at different times and in different situations.<sup>65</sup> Someone

who is adaptive can display one trait in one situation (for example, being agreeable with a customer who has a valid complaint) and the opposite trait in a different situation (for example, being disagreeable with a supplier who is renegeing on an established contract). Someone who is adaptive might also be a natural introvert, but can act like an extrovert if the situation demands this latter trait. Thus, adaptability recognizes variance within one person on traits. Highly adaptable people can handle emergencies and deal effectively with uncertain and unpredictable situations. They also tend to be creative problem solvers and quickly learn new tasks, technologies, and procedures. Finally, they demonstrate a sensitivity to inter-personal and cultural differences, and they can work effectively in many different types of groups.<sup>66</sup>

## Demographic Diversity

Recent trends related to the labor supply have heightened managers' awareness of individual differences found among workers. Most of this awareness has focused less on differences in physical abilities, cognitive abilities, and personality traits, and more on diversity related to demographic characteristics. Much of the current concern about managing demographic diversity can be traced to studies indicating that an increasingly larger percentage of new entrants into the labor pool tend to be women, minorities, or immigrants. In an effort both to secure the best talent and to market products globally, organizations, industries, and entire nations are often looking across national boundaries when making hiring decisions.

Both developments have forced companies that were once predominantly staffed by white males to rethink their hiring policies. Specifically, the experiences of white males are now seen as too homogeneous to enable them to effectively manage a diverse workforce or to effectively exploit opportunities in the global market. Instead, organizations are looking to hire people with different demographic backgrounds in order to broaden their perspectives.

## Legal and Political Aspects of Diversity

In the past, legal and political forces, particularly civil rights activists who tried to increase opportunities for women and minorities in the workplace, drove integration of the workforce. The motivation to level the playing field for women and minorities still exists today, and there are still clear vestiges of discrimination in our culture. For example, a recent study that sent out identical résumés of hypothetical job applicants showed that those that came from people with "white-sounding" names, such as Neil, Brett, Emily, or Anne, were 50 percent more likely to be asked for an interview relative to those that came from people with "black-sounding" names, such as Ebony, Tamika, Rasheed, or Khirese.<sup>67</sup> The Equal Employment Opportunity Commission's "Eradication of Racism from Employment" program is focused on eliminating this kind of racial discrimination, and is especially focused on making examples out of large and familiar organizations, as evidenced by the 2007 class action suit brought against Walgreens.<sup>68</sup>

In the opening of this chapter we noted how the process of stereotyping can lead to unfair decisions and actions taken against members of various groups, and the evidence from research studies suggests that these can be powerful. For example, supervisory ratings of subordinate job performance often reflect a bias against racial minorities, even when objective levels of performance seem to be highly similar.<sup>69</sup> These biases also seem to work in the opposite direction, in the sense that subordinate ratings of leadership also seem to be affected by stereotypes that associate leadership of business organizations with white males.<sup>70</sup> These kinds of stereotypes have also been documented with respect to women, who are less likely to

be seen both as leaders and as successful entrepreneurs,<sup>71</sup> as well as older workers, who are generally perceived as being less adaptable relative to younger workers.<sup>72</sup> In return, stereotypes of younger workers, dubbed Millennials, have been documented suggesting they are perceived as overly demanding, cynical, and lacking in organizational commitment.<sup>73</sup>

Thus, because stereotyping persists, political forces aimed at eliminating discrimination are still alive today. Still, relative to 20 years ago the strength and breadth of these motivations have waned for several reasons. First, to some extent, many of the affirmative action programs instituted in the 1970s and 1980s have achieved some measure of success—as evidenced at least partially by the fact that the U.S. elected an African American president in 2008. More broadly, the evidence indicates that the number of African Americans enrolled in colleges and universities has increased 500 percent since 1965, and over the last 25 years the share of black families earning more than \$50,000 a year rose from 8 percent to 20 percent. In the last five years alone, the ranks of black managers and professionals have increased 30 percent.<sup>74</sup>

The enhanced representation of minorities in these kinds of jobs is critical because research shows that higher levels of diversity in the workforce result in less discrimination in terms of wages and promotions. That is, one sees less perceived ethnic and gender-based discrimination and fewer lawsuits in work contexts where there are higher proportions of women and minorities in the workforce.<sup>75</sup> This does not just seem to be a perceptual effect, but instead seems to reflect actual differences in practices. For example, one study in a large sales organization showed that ethnic and gender based differences in earnings were smaller in teams with proportionately more people of color and women, and in organizations that had a higher proportion of ethnic and female managers.<sup>76</sup>

Second, whereas existing affirmative action programs have failed to completely wipe out discrimination or all the differences between races in outcomes, the perception is that these programs no longer target the groups who need the most support. That is, a growing core of poor inner-city black youths are most often the victims of the international competitive forces that are driving down wages and employment levels for low-skilled workers. Manufacturing jobs that used to support this group are increasingly moving overseas, and the types of benefits that come out of current affirmative action programs benefit affluent, middle-class black workers, rather than those in the inner cities who need the support more desperately.

Finally, the 1990s witnessed an increase in backlash against affirmative action and other remedial programs aimed at minorities, especially by white males who see such programs as giving preferential treatment to other groups at their expense.<sup>77</sup> Moreover, this backlash is particularly strong among younger, Generation X members who grew up having no experience with the segregation that drove early civil rights initiatives. The tolerance that many older white workers had with race-based remedial programs, partially fueled by guilt and direct experience, simply does not exist among younger people who grew up in less segregated schools and neighborhoods.

### **Competitive Aspects of Diversity**

In addition to being motivated by a sense of social justice or fear of litigation, affirmative action programs in the 21st century are also part of a larger strategy that seeks to leverage diverse experience into competitive advantage.<sup>78</sup> On the one hand, increasing the demographic diversity of organizations and work groups can result in higher levels of misunderstandings and conflict, especially when these differences create “faultlines.” Faultlines in work groups occur where multiple dimensions of differences all align on top of one another. For example, if all the supervisors in a company are white males, but all the line workers are minority males and all the support staff are white females, then sex, function, and ethnic



status create strong factions in this company that work against group cohesiveness and effectiveness.<sup>79</sup> In contrast, if each of the separate functions tends to be integrated and if the organization has a culture that values diversity, then one is less likely to see the negative effects of diversity.<sup>80</sup>

Indeed, large-scale studies of organizations have documented the fact that organization-level racial diversity, for the most part, has a positive impact on financial performance, especially in the service sector of the economy.<sup>81</sup> For example, Kaiser Permanente, a large healthcare organization headquartered in San Francisco, found that, because its facilities were under-represented with respect to Asian workers, they often found it difficult to attract Asian patients. Given the demographic make-up of that city, this was an untenable situation, and Kaiser launched an ambitious program to recruit more Asian workers. This program was so successful in terms of promoting financial performance that it was later extended to other racial and ethnic groups, as well as women and older workers. By creating an organization that better reflected its community, the organization was better able to serve the community, which in turn fueled growth and profitability.<sup>82</sup>

Successfully creating a diverse workforce can also enhance a firm's standing in the financial markets. The literature on capital budgeting indicates that valuable investments increase a firm's stock price. A recent study suggests that financial markets view successful diversity management as just such an investment. In this study, researchers examined the stock prices for firms that had won the U.S. Department of Labor's Exemplary Efforts Award for Affirmative Action Programs, comparing these prices to the stock prices of a sample of control firms matched for size and industry. They also examined the stock prices of firms that were publicly cited for discriminatory practices. Stock prices for award-winning firms were found to increase relative to control firms after the announcement of the awards, whereas stock prices for firms that were cited for violations declined.<sup>83</sup> Indeed, given the financial benefits that seem to accrue from affirmative action programs, it is not surprising that, when the government recently challenged the legality of such a program at the University of Michigan, more than 30 of the country's largest companies, including Microsoft, General Motors, Bank One, and Steelcase, wrote a letter supporting the university's policy.

Once minority workers are hired, firms that value diversity also need to ensure that they can retain the services of members of these groups. Turnover rates among minorities at the managerial level are often two to three times higher than the rates for white males, with the difference often attributable to a perceived lack of opportunities for promotions. Retention of minority representation is enhanced by establishing programs that promote mentoring relationships between new minority employees and more established organizational members.<sup>84</sup> In fact, one study found that the real key in such programs is linking up women and minority members with white male mentors. The benefits that accrue from these cross-race and cross-gender pairings for the new worker seem to be much larger than those realized by women and minorities who have mentors with the same demographic characteristics.<sup>85</sup> Of course, beyond these factors, diversity programs must receive top managerial support if they are to be successful.<sup>86</sup> Indeed, a recent research study involving approximately 800 managers pointed to this factor as the single most important characteristic in predicting the success of these programs. The second most critical factor was the organization's ability to channel this top-level enthusiasm down the hierarchy. The best way to ensure that the effects trickle down is to formally appraise and reward middle- and lower-level managers for creating, maintaining, and profiting from diversity.<sup>87</sup>

Although people generally think of race and sex as the major workforce diversity issues, one of the more sweeping demographic forces with which many organizations are attempting to come to grips is the aging of the workforce. The majority of the 76 million baby boomers

born between 1946 and 1960 are now, or will soon be, 60 years old. Because of the “baby bust” that occurred between 1965 and 1976, many have predicted that organizations will eventually face major labor shortages. Some firms are seeking to turn these trends into a competitive advantage by hiring and retraining older workers.<sup>88</sup>

For example, McDonald’s Corporation has recently struggled to find the young workers who once dominated the ranks of its employees. To deal with this problem, the company initiated the ReHIREment Program, which attempts to entice older individuals to work in its restaurants. As part of this program, McDonald’s developed specific recruiting materials geared toward the older generation. Whereas its recruiting brochures for young candidates emphasize the learning opportunities and long-term career benefits of McDonald’s jobs, the brochures in the ReHIREment Program stress the scheduling flexibility and the fact that part-time earnings do not threaten Social Security earnings.<sup>89</sup> Home Shopping Network (HSN), the Clearwater, Florida based cable network, operates a program for older employees similar to that used at McDonald’s. Located in an area well populated by retirees, HSN uses older workers on a part-time basis to answer telephones and take orders for merchandise advertised on its shows. It also maintains a sensitivity program for its managers that gives them valid information about what is fact and what is fiction in the area of aging and job performance.<sup>90</sup>

Indeed, even locations that are not a traditional haven for retirees like Florida are finding access to an increased supply of older workers, partly fueled by the recent financial crisis. That is, since most retirees tend to save for their own retirement via 401(k) plans that are heavily influenced by stock prices, the recent drop in the stock market ravaged the retirement portfolios of many people, sending them back to the labor pool. For example, at Retirementjobs.com, a career site for people over the age of 50, the number of people who registered for jobs spiked to 600,000 from a previous high of 250,000 in late 2008.<sup>91</sup>

Although there may be some negative stereotypes regarding older workers, a recent comprehensive study of over 70,000 workers suggests that almost all of these stereotypes are false. This study found no difference between younger and older workers on core measures of technical job performance, and older workers outperformed younger workers on other important performance aspects including citizenship behavior, safety records, absenteeism, and turnover rates. Also, organizations that have had negative experiences in the past with workers who displayed substance abuse problems, counter-productive behaviors, or workplace violence issues often turn to older workers, who are ten times less likely to create the same kind of difficulties.<sup>92</sup>

Replacing outdated stereotypes with actual scientific data regarding individual differences is thus a critical skill for today’s managers. Consequently, many organizations are trying to train their workers to raise their sensitivity to these kinds of issues. When sensitivity training programs work well, they are able to dispel the mirror image fallacy, yet avoid fostering prejudicial stereotypes about various groups. They achieve their success by helping managers focus on individuals as individuals, each of whom can be seen as a unique constellation of physical abilities, cognitive abilities, personality traits, and experiences. Each personal profile of abilities, traits, and experiences is idiosyncratic, and their differences transcend simple categorization schemes based solely on sex, race, age, or culture.

## Summary

Individuals differ on a number of dimensions. Taking advantage of this fact is essential to effective control of organizational behavior. Individuals differ in three primary physical abilities: *muscular strength*, *endurance*, and *movement quality*. In many job situations, people

who lack the necessary physical abilities may perform poorly and put themselves and others at risk for injuries. Individuals may also differ in their cognitive abilities. *General cognitive ability* has important implications for a wide variety of jobs. Indeed, this characteristic is relevant for any job that requires planning and complex decision making on a daily basis. General cognitive ability also affects both a person's ability to learn the job and his or her ability to adapt to new situations. Five specific facets of cognitive ability are *verbal ability*, *quantitative ability*, *reasoning ability*, *emotional intelligence*, and *cultural intelligence*. These characteristics supplement general cognitive ability in affecting performance on certain types of jobs. Individuals may also differ in personality characteristics, which often spill over into job-performance differences. The Big Five framework, which focuses on *extroversion*, *agreeableness*, *emotional stability*, *conscientiousness*, and *openness to experience*, can be used to organize these traits and suggest how each might be related to job performance. Finally, the changing nature of the workforce means that the labor pool is also growing more diverse in terms of its demographic and cultural background. In order to gain competitive advantage from demographic and cultural diversity, managers need to move beyond false stereotypes regarding various groups and directly assess the true abilities and traits of each individual person with reliable and valid methods.

### Review Questions

1. Is the mirror image fallacy more likely to affect our assessments of others' abilities or our assessments of their personalities? Are particular dimensions of ability or classes of personality characteristics especially susceptible to this kind of mistaken perception? Explain.
2. Think of someone you know who is highly successful in his or her chosen field. What were the important personal characteristics that led to this person's success? Now think of what would have happened if that person had chosen a different line of work. Do you think this person would have been successful in any field, or can you imagine lines of work for which the person was poorly suited? How does your answer to this question relate to the selection-versus-placement distinction?
3. Imagine someone who is turned down for a job because of (a) his or her performance on a paper-and-pencil cognitive ability test, (b) an interviewer's assessment of the person's intelligence and conscientiousness, or (c) his or her responses to a personality inventory. What differential reactions would you expect from this person? Explain your answer.
4. What message is indirectly sent to applicants by firms that employ rigorous selection testing, and why might a firm hand out several different kinds of tests to prospective employees even if they have no plan on scoring them?

# Perception, Decision Making, and Creativity

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It may have been one of the most expensive sets of flights ever taken. In November of 2008, U.S. automobile executives flew to Washington D.C. to request a \$34 billion bailout to help them stay alive during the financial crisis that gripped the industry. Not realizing the non-routine nature of this mission, they did what they always did in this case, and flew to the Congressional hearings in private corporate jets. One could argue that, in the overall scheme of the industry's woes, the cost of these flights was trivial, and perhaps even necessary for security reasons. However, the perception of this act on the part of Congress and its constituents was that this was just more evidence of the industry executives' arrogance and insensitivity to costs. Many suggested that this just showed how out of touch this group was relative to the rest of the world, and suggested that companies run by such leaders could never be competitive against more efficient foreign competitors. It was not clear why the American taxpayer should be asked to fund the lavish lifestyles of these auto industry executives, and Senator Robert Corker perhaps reflected this perception best by concluding that "the best thing is for y'all to go away."<sup>1</sup> The executives did go away, and empty-handed at that. One month later, this same group returned, and they were eventually granted half of what they were looking for, \$17 billion. This time, however, they drove to Washington in hybrid vehicles.<sup>2</sup>

*Perception* is the process by which individuals select, organize, store, and retrieve information. *Decision making* is the process whereby this perceived information is used to evaluate and choose among possible courses of action. As this example from the automobile industry shows, decision-making errors can be costly, and in many cases these errors are driven by a corresponding failure to anticipate and understand the perceptions of other people. In hindsight, the foolishness of going begging for money in corporate jets was evident even to the automobile executives. In fact, as one executive outside the industry noted, "now, any display of wealth is perceived negatively." Partially as a result of this fiasco, all companies backed off from the use of corporate jets, and orders for this luxury item dropped precipitously after this event.<sup>3</sup> Unfortunately for the auto executives, by the time they realized this, the damage was already done. Moreover, if the message the automobile executives were trying to send was that they were going to change their ways, by doing things the way they always did (i.e., flying private jets), this hardly sent a reassuring message about their ability to reinvent themselves. Indeed, in addition to having accurate perceptions of the present conditions, decision makers need to be able to envision the future and use their vision to generate *innovative and creative* options, which is the antithesis to doing things the way you always do.

These three topics—perception, decision making, and creativity—are examined in this chapter. The first section explores the process of human perception and discusses the keys to

developing accurate beliefs about oneself and one's environment. Translating these accurate beliefs into decisions that are rational—or at least satisfactory—is the focus of the second section. Finally, the third section, on creativity, examines the process of going beyond the traditional decision options to uncover new and innovative alternatives. Although the U.S. may struggle in terms of competing in industries like automobile production where efficiency is critical, historically the nation has fared better when it comes to developing new creative ideas (e.g., Google, Facebook, the iPod). In fact, even the automobile was first invented in the United States. Still, dominance in this area is not a birthright, and more recent evidence suggests that Asian countries like China, Japan, and South Korea are increasingly at the center of many new innovative products.<sup>4</sup>

Figure 4.1 provides an overview of the processes of perception and decision making; it will serve as a road map for the first two sections. Specifically, we start at the left of Figure 4.1, which shows the environment in which the individual is embedded. Through the perceptual process, the individual uses some portion of the information that exists in that environment to make decisions. The process of perception will be broken down into three stages: attention, organization, and recall. In Figure 4.1, the boxes become smaller as we move from left to right, indicating that some information is lost at each stage.

At the end of the perceptual process, the decision is “framed”; that is, the decision maker finishes the process of collecting information and states the decision-making problem in specific terms. At this point, the decision-making process begins. The information collected in the perceptual process is evaluated in terms of what outcomes may result from various decisions and what odds are associated with various outcomes. Using the combined assessment of outcomes and probabilities, the decision maker chooses those alternatives that are most likely to lead to good outcomes and rejects those alternatives that are either unlikely to lead to good outcomes or likely to lead to bad outcomes. We will explore each substage of the perception and decision-making processes more closely in the sections that follow.

## Perceptual Processes

Humans have five senses through which we experience the world: sight, hearing, touch, smell, and taste. Most of us “trust our senses,” but sometimes this blind faith can lead us to believe that our perceptions are a perfect reflection of reality. People react to what they perceive, and their perceptions do not always reflect objective reality. This discrepancy can create major problems, because, as the difference between perceived and objective reality increases, so too does the opportunity for misunderstanding, frustration, and conflict.

You can begin to appreciate the vast possibilities for perceptual distortion by considering some well-known illusions (Figure 4.2). Obviously, if we can misperceive something as objective as size, shape, and length, then our likelihood of misperceiving something more

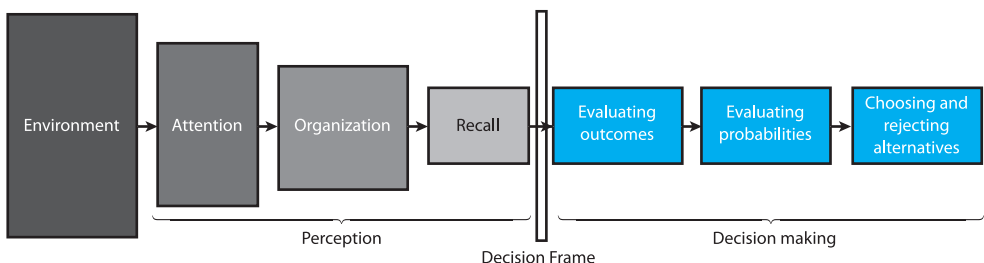
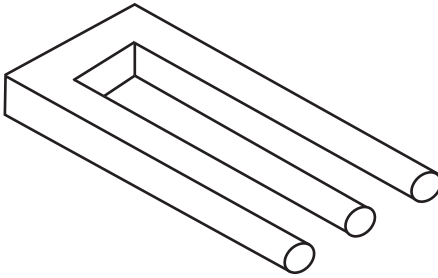
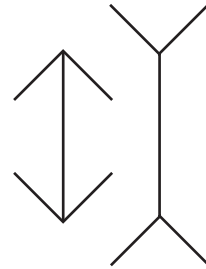


Figure 4.1 The Processes of Perception and Decision Making

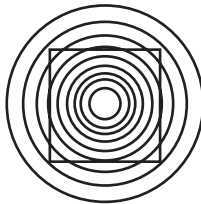
A. Are there two or three prongs on this object?



B. Ignoring the arrows, which vertical line is longer?



C. Are the four lines of the inner square straight lines?



D. Which dotted circle is larger?

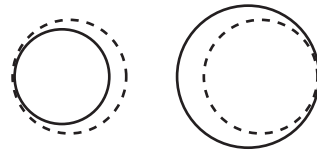


Figure 4.2 Four Common Perceptual Illusions

subjective, such as the intentions or thoughts of other people, is high. For example, the data displayed in Table 4.1 show differences in perceptions between employers and employees from a survey of 13,000.<sup>5</sup> These kinds of perceptual differences within a work group can lead to trouble and frustration for both the manager and the people with whom that manager works. Consequently, a great deal of research over the past 50 years has focused on reducing the gap between the perceptions of managers and subordinates.

For example, 360-degree feedback programs where managers' self-ratings on various skills are compared to ratings provided by their bosses, peers, and subordinates are now

Table 4.1 Perceptual Differences between Employers and Employees Regarding Rewards

	Employees	Employers
Quality of work environment	24%	46%
Cash incentive targets	26%	44%
Merit increases	27%	43%
Recognition programs	21%	42%
Profit sharing	20%	36%
Long-term incentives	15%	29%
Tuition reimbursement	13%	21%
Flexible work schedules	20%	36%
Rotation of assignment	18%	49%
Career development	21%	50%
Training opportunities	26%	58%

Source: *Workforce Management*, November 19, 2007, p. 15.

commonplace in organizations. Research suggests that in most cases, similarly to what is documented in Table 4.1, managers' self-perceptions tend to overestimate their skills relative to ratings provided by others.<sup>6</sup> As one recipient of such feedback at HCL Technologies noted, "There was this whole picture of me that emerged suggesting I was a heavy taskmaster. It was very unsettling the first time."<sup>7</sup> Managers who are armed with this feedback can sometimes improve their ratings over time, but this is not guaranteed, and improvement seems to depend on a number of factors. For example, one sees more improvement when managers accept the feedback, set specific goals for their future performance, and develop concrete action plans for meeting those goals.<sup>8</sup>

### Attention

At any given moment in time, our five senses are bombarded with information of all sorts. In the **attention stage**, most of this available information is filtered so that some enters the system but other information does not. Failures to filter this information can result in information overload, destroying concentration, and harming task performance. In the past, managers who needed to concentrate might have just gone into their offices and locked their doors to reduce some of this volume. However, with today's technology, between cell-phone calls, e-mails, text messaging, and social networking interruptions, there is almost nowhere to hide. Research has estimated that non-task related distractions account for 28 percent of the average U.S. worker's day, sapping over \$600 billion from the overall economy.<sup>9</sup> On the other hand, if critical information is never attended to it can never figure into decision making, thus resulting in decision-making errors. Thus, the attention stage is obviously critical in terms of its gatekeeping function, and we need to appreciate how characteristics of the perceiver affect the way in which attention is directed.

For example, the perceiver's expectations of an object will often influence his or her evaluation of that object.<sup>10</sup> This reaction occurs partly because a person's attention is more easily drawn to objects that confirm the individual's expectations. Indeed, in the performance appraisal context, supervisors who are led to anticipate that one group of workers is likely to perform better than another tend to rate subordinates in a way that reflects these expectations, even when the subordinates perform at exactly the same objective level.<sup>11</sup> In contrast, when expectations are violated, they often lead to negative reactions. For example, because societal stereotypes suggest that women ought to be nurturing and socially sensitive, women managers who display "toughness" are often penalized in subordinate ratings of performance for behaviors that are not penalized when manifested by male managers.<sup>12</sup>

In addition to expectations, the frequency with which a message is relayed also strongly influences the degree to which one attends to it. This is why repetition is a common element in most advertising campaigns, but the impact of repetition can also be seen when it comes to managerial behavior. For example, research shows that people are more likely to infer that a message is true and popular the more often one hears it—even when the message is simply being repeated by the same person. That is, people sometimes confuse repetition from one single source with consensus from multiple independent sources, even though there may be more validity in the latter relative to the former.<sup>13</sup>

### Organization

Although much information is automatically filtered out at the attention stage, the remaining information is still too abundant and too complex to be easily understood and stored. Because human perceivers can process only a few bits of information at a time, in the **organization**

**stage** they further simplify and organize incoming sensory data. For example, humans “chunk” several discrete pieces of information into a single piece of information that can be processed more easily.

To see how effective this kind of chunking can be, imagine your reaction if someone asked you to memorize a string of 40 numbers. You might doubt your capacity to memorize so many numbers regardless of how much time you had. Your doubts are probably misplaced, however. If asked to do so, you could probably write down (a) your Social Security number, (b) your telephone number with area code, (c) your license plate number, (d) the month, date, and year of your birth, (e) your current ZIP code, and (f) your height and weight. You might say, “Well, yes, but these are only six numbers.” Note, however, that (a) and (b) have nine digits each, (c) and (d) have six digits, and (e) and (f) probably have five; together, the data include a grand total of 40 digits. The fact that humans think of these bits of information as six numbers rather than 40 digits shows how we mentally chunk things together. In fact, using the chunking process, you can memorize many more than 40 numbers (think of all the telephone numbers, ZIP codes, and birthdays that you can recall), which attests to the efficiency of this type of organizing process.

When chunking non-numerical information, the chunks are called schemas. **Schemas** are cognitive structures that group discrete bits of perceptual information in an organized fashion. Schemas are often less complex relative to the actual perceptual object they represent, and thus they create a trade-off between simplicity and understanding on the one hand versus accuracy and detail on the other hand.<sup>14</sup> Two types of schemas are particularly important to understanding the processing of social–interpersonal information: scripts and prototypes.

Schemas that involve sequences of actions are called **scripts** because they resemble the material from movies or plays. Clearly, numerous events in organizations can be conceived of as scripts, such as “taking a client to lunch,” “preparing a written report,” or “disciplining a subordinate.” Each script involves certain sequences of behavior. Thus a request to take a client to lunch is actually a request to engage in hundreds of sequenced behaviors. Although this shorthand is clearly an efficient way of communicating, not everyone will define a script in the same way, with the exact same specific behaviors. For example, some organizations may have informal norms that discourage drinking alcohol at business lunches. A new employee who is told to “take a client to lunch” may not be aware of this specific part of the script, and get in trouble for “drinking on the job.” Thus, while the kind of simplification provided by scripts is vital for efficient information processing, their use may lead to adding things that were not meant to happen or deleting things that were actually supposed to happen. Clarifying these scripts is essential to ensure perceptual accuracy.

While some schemas focus on simplifying descriptions of events, others seek to simplify the descriptions of people. **Prototypes** are schemas that enable us to chunk information about people’s characteristics. For example, if one manager asks another manager what a new employee is like, the second person may report that the new hire is spirited, exuberant, outgoing, boisterous, and warm. The manager might then say, “You mean she’s an extrovert.” In this example, multiple bits of information are chunked into one word that is meant to provide a detailed description of a person. Like scripts, however, prototypes sometimes carry excess baggage and thus may not reflect the person accurately—especially if two people hold different beliefs about the meaning of the word *extrovert*.

One area where this type of chunking creates difficulties is in the area of performance appraisal. When managers are asked to provide subjective ratings of their subordinates’ performance, they are often asked many different questions with the idea that each worker has strengths and weaknesses (e.g., efficiency versus creativity), and detailed feedback on each of these can be used by the person being rated to pinpoint areas of improvement. In reality,



however, many raters fall victim to the “**halo error**,” which means that they categorize their subordinates first into an overall classification of “good” versus “bad,” and then base their specific judgments on the overall classification, not the actual dimension. Thus, whereas one might expect a mix of positive and negative ratings, instead one sees an overall picture of good or bad on all dimensions that say more about the person’s reputation and the categorization scheme than the person’s actual behavior.<sup>15</sup>

This halo error can also be seen at the organizational level, and many organizations go to great lengths to ascertain and manage their overall reputation. For example, studies suggest that companies that enjoy a positive reputation in the media have stock prices that are 3 to 7 percent higher relative to firms matched on size and industry that do not have the same high reputation.<sup>16</sup> In fact, some have suggested that, if Wal-Mart, which has generally been found to have a negative reputation, had a similar reputation to Target, this would be worth \$9.7 billion in terms of the firm’s overall market value.<sup>17</sup>

In the area of organizational behavior, the “leader” prototype is an important one. Most managers want others to perceive them as leaders. What characteristics are likely to cause people to categorize someone in this way? According to a classic study conducted by Robert Lord, the leader prototype consists of the 12 characteristics shown in Table 4.2. People who exhibit most of these characteristics will be seen as leaders.

In today’s more collaborative organizational contexts, it is also critical to be perceived as flexible, adaptable, and able to bring about change—three characteristics that some have argued favor female leaders over their male counterparts.<sup>18</sup> Indeed, the percentage of senior executive positions held by women reached 11 percent in 2000. Although much of this increase in female leadership occurred in the high-tech sector, large gains were also witnessed in manufacturing sectors of the economy that were formerly hostile to female leaders.<sup>19</sup> Still, biases against women leaders persist. For example, during the recent presidential campaign, television anchor Katie Couric asked Hillary Clinton why she thought that the media portrayed Sarah Palin as a “Barbie Doll” and Clinton as a “Nutcracker.”<sup>20</sup> This question reflects two common “prototypes” often leveled against women leaders, as well as the double standard that seems to exist across the sexes.

When prototypes are organized around social categorizations such as this, they revert to **stereotypes**, a concept we covered in the previous chapter. In one study, business students displayed a clear stereotype of the elderly. Among other things, they described this group

**Table 4.2** Major Characteristics of the Leader Prototype (in Descending Order of Importance)

1. Intelligent
2. Outgoing
3. Understanding
4. Articulate
5. Aggressive
6. Determined
7. Industrious
8. Caring
9. Decisive
10. Dedicated
11. Educated
12. Well dressed

Source: Adapted from R. G. Lord, R. J. Foti, and D. DeVader, “A Test of Leadership Categorization Theory: Internal Structure, Information Processing, and Leadership Perceptions,” *Organizational Behavior and Human Performance* 34 (1984), 343–378.

as less creative, less able to do physically demanding work, and less able to change or be innovative. These perceptions led the students to make other negative judgments about elderly workers. For instance, they expressed the belief that these workers would be less likely than younger workers to benefit from training and development. Given the increasing age of our national workforce, such stereotypes need to be reconsidered.<sup>21</sup>

### Recall

After information is organized, it next must be stored in memory for later retrieval. Just as raw information is sometimes lost when it is organized into scripts and prototypes, so, too, information can be lost in the storage and retrieval process. To see how this loss can create illusions and lead to decision-making errors, consider the following problem: In a typical passage of English prose, does the letter *k* occur more often as the first or the third letter in a word? When confronted with this problem, twice as many people choose first letter as choose third letter, even though *k* appears in the third spot almost twice as often as in the first. This phenomenon can be explained in terms of the **availability bias**, which means that people tend to judge the likelihood that something will happen by the ease with which they can call examples of it to mind. Most people assume that *k* is more common at the beginning of words simply because humans store words in memory by their first letters—not their third letters. For this reason, it is easier to retrieve and remember words beginning with *k* than words that have *k* as their third letter. The availability bias also manifests itself in a tendency for people to overgeneralize from the recent past to make assumptions about what is going to happen next.

You can see the availability bias at work by considering the way that people think about death, illness, and disasters. In general, people vastly overestimate the number of deaths caused by spectacular events such as airplane crashes and underestimate the number of deaths caused by illnesses such as emphysema or heart disease. Deaths caused by sudden disasters are more easily called to mind because they are so vivid and public, often making the front pages of newspapers across the country. Death caused by illness, on the other hand, is generally private and thus less likely to be recalled. The tendency to confuse the probability that something will happen with the ease with which one can remember it is especially a problem for decision makers who are inexperienced or low in cognitive ability.<sup>22</sup>

Another problem that can arise at the recall stage is hindsight bias. **Hindsight bias** occurs when people feel that they would have predicted the outcome to events better than they actually did or better than they actually would have if they had been asked to make a forecast. For example, a group of students might be asked to read a case that sets up an important decision, such as whether a person should invest in a risky “dot-com” stock. The students would be asked to state the probability of getting a 20 percent return on investment. After the passage of time, the same individuals are told that the company either went out of business or gave a 40 percent return on investment, and they are asked to recall their original probabilities. People who are told about positive outcomes tend to recall their probabilities of reaching the 20 percent return on investment goal as being much higher than they really were. People who are told that the company failed, on the other hand, tend to recall their probabilities of reaching a 20 percent return as being much lower than they really were.<sup>23</sup>

Hindsight bias is particularly problematic in contexts where there is a great deal written about various problems or decisions, because this past written record makes it clear that some people might have been able to predict the future better than others. For example, during the recent collapse of financial giant Bear Stearns, company officials were clearly victims of perceptual distortion. When asked about how the falling housing market would affect the firm, which was highly leveraged into sub-prime mortgages, top executive Ralph Cioffi stated that

“We’re going to make money on this—we don’t believe what the markets are telling us.”<sup>24</sup> However, at the same time, many state regulation officials were trying to end the practice of selling sub-prime loans for fear of what it was doing to consumers.<sup>25</sup> Moreover, other financial experts such as Warren Buffett were also decrying the practice, referring to sub-prime loans as “weapons of mass destruction” as early as 2002.<sup>26</sup> Thus, when Bear Stearns went bankrupt in 2008, a large number of investors sued Cioffi, accusing him of fraud.

### **Reducing Perceptual Problems**

Clearly, there are many ways that a human observer can fail to portray the environment accurately. Fortunately, one can take many steps to avoid these problems. First, accuracy can be improved by increasing the frequency and representativeness of observations. That is, the observer can be exposed more often to whatever needs to be observed, with instructions to look for things that they did not necessarily expect. This is a direct way of trying to counter expectation effects in rating by making the unexpected more salient and detectable, thus heightening the accuracy of perceptions.<sup>27</sup>

Second, taking care in how and when observations are made can ensure the representativeness of the information. That is, the manner in which observations are obtained should be thoughtfully considered. Random sampling will increase the probability that the resulting observations are accurate. If a supervisor observes a group of workers only at a given time on a given day or only when problems develop, the observations may not reflect the group’s true behavior. In addition, because the very act of observing someone can cause him or her to alter the normal behavior (and thus destroy representativeness), it is important to make observations as unobtrusively as possible.

The opportunities to observe employee work behaviors frequently, randomly, and unobtrusively have increased rapidly with technological developments in the field of surveillance. The increased use of computerized employee monitoring has been a product of two forces. First, the need to observe employees’ work behaviors has long existed, and recent developments in surveillance technology have simply made this endeavor easier and less obtrusive. For example, at Christiana Care Hospital, an electronic tracking system that was already used to track every piece of equipment was used to tag every employee and every patient. The use of these radio frequency identification (RFID) systems makes it quicker and easier to find where people are and vector them to where they need to be, speeding up care and service. These systems are especially good for detecting when people are not where they are supposed to be, and, because an increasing number of court cases have held employers liable for the mistakes or crimes of employees, these systems provide some protection from misbehaving employees.<sup>28</sup>

Of course, some have noted that these developments have seriously eroded employees’ right to privacy, and finding the right balance between employees’ rights and the rights and responsibilities of employers to monitor workers is not a simple process. One critical feature that predicts how employees will react to this kind of monitoring is the degree to which they are given advance notice about the practice. People who are given advance warning feel much more positive about the practice and are less likely to turn over than people who learn of it on their own.<sup>29</sup> In addition, if employees are high in organizational commitment, they tend to trust the organization more and thus are more tolerant of this kind of electronic surveillance.<sup>30</sup>

The accuracy of perceptions can also be improved by obtaining observations from different people and different perspectives. Having multiple points of view is especially valuable when it comes to self-perceptions of upper-level managers, who often overestimate their interpersonal

effectiveness when their perceptions go unchecked.<sup>31</sup> This kind of misperception is based more on ignorance than arrogance, because few people are eager to give their boss negative feedback—even if he or she directly asks for it.<sup>32</sup> In order to overcome these problems, as we noted earlier, organizations have increasingly turned to 360-degree feedback programs where managers receive anonymous survey feedback on their strengths and weaknesses from supervisors, peers, and subordinates, and then compare the perceptions of these people to their own self-rated strengths and weaknesses. Managers who tend to overestimate their strengths and underestimate their weaknesses typically perform the worst when it comes to external performance indices, and the purpose of these kinds of feedback programs is to bring perceptions more in line with reality.<sup>33</sup>

Because observers tend to ignore information that does not match their expectations, it is often a good idea to actively seek out information that is inconsistent with or contradicts one's current beliefs.<sup>34</sup> For example, Bell Atlantic uses a team of managers to play the “devil’s advocate” role in organizational decision making. This group is explicitly assigned the role of challenging and disputing the key assumptions on which decisions are being made. People are often reluctant to assume this role on their own because they want to be seen as a “team player” rather than a “heretic.” By explicitly saying that someone’s role on the team is that of a heretic, Bell Atlantic ensures that the role is covered and no one becomes alienated from the team.

When a person must work with social groups that differ from his or her own, another method for ensuring perceptual accuracy is to increase that individual’s exposure to different social groups in an effort to develop more accurate prototypes. Research shows that experts in all kinds of domains differ from novices not because they ignore prototypes but because they develop more complex, detailed prototypes that are more accurate. By making novices use the same frame of reference as experts, this can speed the development of novice raters.<sup>35</sup>

## Decision-Making Processes

At the end of the process of perception depicted in Figure 4.1, the decision has been framed. That is, the decision maker has collected and discarded various pieces of information to arrive at the final set of information that will be used in making the final decision. From this point on, this set of information will be further processed in an effort to choose which course of action to accept and which alternatives to reject. Two general models are employed in understanding the decision-making process: the rational model and the administrative model.

### The Rational Decision-Making Model

The rational decision-making model is sometimes referred to as the rational-economic model, reflecting its ties to classic theories of economic behavior. As originally developed, this model included a primary assumption of economic rationality—that is, the notion that people attempt to maximize their individual *economic* outcomes. The system of values consistent with this assumption assesses outcomes based on their current or prospective monetary worth. Values of this type are used in business situations whenever managers weigh alternatives in terms of profitability or loss. They then choose one of the alternatives and implement it as the preferred solution or decision. This choice is determined through a process of utility maximization, in which the alternative with the highest expected worth is selected as the preferred alternative. The expected worth of a particular alternative consists of the sum of the expected values of the costs and benefits of all outcomes associated with that alternative.

Ideally, observers would use this information in a rational way to reach their final decisions. Such is not always the case, however. Our earlier discussion used perceptual illusions to show that perception is not nearly as straightforward as it seems. Here, we will use “decision-making illusions” to show how things can go wrong in the decision-making process.<sup>36</sup>

### *Evaluating Outcomes*

As a prelude to this discussion, read the text in the box headed “Two Strategies for Handling an Environmental Threat” and decide what strategy you would choose if you were the sales executive faced with the situation described. If you perceive strategy one (save the 200 accounts for sure) to be the best approach, you are not alone. Research shows that managers and non-managers alike perceive this choice as preferable to strategy two by a margin of roughly three to one.

#### **TWO STRATEGIES FOR HANDLING AN ENVIRONMENTAL THREAT**

The development of a new technology by a competitor threatens the viability of your organization, which manages 600 accounts. You have two available strategies to counter this new technology. Your advisors make it clear that, if you choose strategy one, 200 of the 600 accounts will be saved. If you choose strategy two, there is a one-third chance that all of the 600 accounts will be saved and a two-thirds chance that none will be saved.

Which strategy will you choose?

*Source:* Adapted from A. Tversky and D. Kahneman, “The Framing of Decisions and the Psychology of Choice,” *Science* 211 (1981), 453–458.

Now turn to a similar decision situation, shown in the box headed “Two More Strategies for Handling an Environmental Threat,” and decide which strategy is preferable under these circumstances. If you judge strategy two as being the best option, again you are not alone. Research shows that this choice is preferred by a margin of roughly four to one over strategy one.

#### **TWO MORE STRATEGIES FOR HANDLING AN ENVIRONMENTAL THREAT**

The development of a new technology by a competitor threatens the viability of your organization, which manages 600 accounts. You have two available strategies to counter this new technology. Your advisors make it clear that, if you choose strategy one, 400 of the 600 accounts will be lost. If you choose strategy two, there is a one-third chance that no accounts will be lost and a two-thirds chance that all will be lost.

Which strategy will you choose?

*Source:* Adapted from A. Tversky and D. Kahneman, “The Framing of Decisions and the Psychology of Choice,” *Science* 211 (1981), 453–458.

The surprising thing about these results is that the problems described are virtually identical. Reread the paragraphs in the two boxes. Strategy one is the same in both tables. The only difference is that in the first box it is expressed in terms of accounts *saved* (200 out of 600), whereas in the second box it is expressed in terms of accounts *lost* (400 out of 600). Clearly, if 200 accounts are saved, 400 accounts are lost, and vice versa. Why is strategy one preferred in the situation described in the first box and strategy two preferred in the situation outlined in the second box?

Research by Nobel Prize-winning scientist Daniel Kahneman and his colleague Amos Tversky indicates that, in general, people have a slight preference for sure outcomes as opposed to risky ones. However, this research also shows that people hate losing.<sup>37</sup> This **loss-aversion bias** affects their decision making even more strongly than their preference for nonrisky situations. When given a choice between a sure gain and a risky gain, most people will take the sure thing and avoid the risk. When given a choice between a sure loss and a risky loss, however, most people will avoid the sure loss and take a chance on not losing anything.

A real-world example of this can be seen in Arthur Andersen's risky decisions regarding aggressive accounting practices that it employed as part of its work with Enron. Over the last decade, Arthur Andersen increasingly derived more of its revenue growth from its consulting contracts as compared to its auditing business. Wanting a larger share of its own success, the consulting side of the business, which brought in close to \$10 billion a year in revenue, sought independence. An arbitrator granted them this freedom (creating a new company called Accenture) in return for a one-time \$1 billion payment to the parent company. Faced with this huge loss of revenue, Arthur Andersen became highly aggressive in trying to rebuild its consulting business, and many have speculated that an unwarranted level of risk seeking made it overlook problems that were being caused by one of its best-paying new clients—Enron. Former Federal Reserve chairman Paul Volcker stated bluntly, "There is no doubt in my mind that Andersen took its eye off the ball by basing what was acceptable practice on how much revenue it could generate."<sup>38</sup>

In addition to people's asymmetric treatment of losses and gains, evaluating outcomes is also complicated by the fact that often multiple outcomes need to be met, and these may be at odds with each other. For example, we may want decisions to be both timely and correct but, in many contexts, speed and accuracy of decision making are negatively related to each other, and respond differently to managerial actions.<sup>39</sup> Research shows that putting workers in competition with each other generally makes them work faster, but with less accuracy, whereas promoting cooperation among workers increases their accuracy but slows them down.<sup>40</sup> Moreover, once a group or organization commits itself to competing on speed or accuracy, this initial decision often persists and forces the group to maintain its current emphasis into the future, even when it might make more sense to change.<sup>41</sup>

### *Evaluating Probabilities*

Irrationality can also enter into the decision-making process through errors made in evaluating the probabilities associated with various outcomes. For example, consider the decision-making problem described in the box headed "Identifying a Hit-and-Run Driver." Most people would conclude that the hit-and-run driver was in the blue cab. In fact, the odds are much better that the cab was green.

### IDENTIFYING A HIT-AND-RUN DRIVER

A cab is involved in a hit-and-run accident.

Two taxicab companies serve the city. The Green Company operates 85 percent of the cabs, and the Blue Company operates the remaining 15 percent.

A witness describes the hit-and-run cab as blue. When the court tests the witness's reliability under circumstances similar to those on the night of the accident, the witness correctly identifies the color of a cab 80 percent of the time and misidentifies it 20 percent of the time.

Which cab company was most probably involved in the hit-and-run accident?

Source: Adapted from A. Tversky and D. Kahneman, "The Framing of Decisions and the Psychology of Choice," *Science* 211 (1981), 453–458.

That is, if 100 cabs operated in the city, 85 would be green and 15 would be blue. This base rate represents the initial probability given no other piece of information. Using the premise established in the box, which says that the witness (who provides an additional piece of information over and above the base rate) would be right 80 percent of the time, we can analyze what would happen in each possible scenario. If the cab in the accident was actually blue, the witness would identify it correctly as a blue cab 12 times ( $.80 \times 15 = 12$ ) and would incorrectly identify it as a green cab 3 times ( $.20 \times 15 = 3$ ). If the vehicle was a green cab, however, the witness would correctly identify it 68 times ( $.80 \times 85 = 68$ ) and misidentify it 17 times ( $.20 \times 85 = 17$ ). Thus the odds are much greater that the witness's identification of the cab as blue was a misidentification of a green cab (which happens 17 out of 100 times) than a correct identification of a blue cab (which happens only 12 out of 100 times).

The reason why virtually everyone who approaches this problem naively gets it wrong is the tendency to give too much weight to the evidence provided by the witness and not enough weight to the evidence provided by the base rate. Because of **base rate bias**, people tend to ignore the background information in this sort of case and feel that they are dealing with something unique. In this example, decision makers will discount the evidence regarding how few cars are actually blue, and instead put more confidence in human judgment about the color of the car. Ignoring the base rate can lead to irrational decisions, and this bias is pervasive among decision makers, regardless of their level of cognitive ability.<sup>42</sup>

The problem of misplaced confidence is particularly pronounced when more than one probabilistic event is involved. Not surprisingly, actual business ventures frequently face such situations. Suppose, for example, that a house builder contracts to have a house completed by the end of the year. Assume also that the chances of accomplishing four specific tasks in time to meet this deadline are as follows:

Get permits	Excellent (90%)
Get financing	Very good (80%)
Get materials	Excellent (90%)
Get subcontractors	Very good (80%)

Reviewing these data, the builder might well conclude that there is a good to excellent chance that the project can be completed in the time specified in the contract. In fact, the odds of this outcome are only 50–50. Multiplying the four probabilities together ( $.9 \times .8 \times .9 \times .8 = .52$ )

gives slightly more than 50 percent—hardly a good to excellent chance. The axiom known as Murphy’s law states that “anything that can go wrong will go wrong.” This view may be a tad pessimistic, but in a long series of probabilistic events the odds are quite good that any one event will go wrong, and sometimes a single mishap can destroy an entire venture. Any business executive who is putting together a deal where the ultimate outcome depends on a series of discrete events, none of which is a sure thing, must keep this fact in mind.

### *Dynamic Influences*

The rational model assumes that each decision is made independently of other decisions—that is, each decision is examined on its own merits in terms of outcomes and probabilities. Irrationality can creep into the process, however, because in reality people often see decisions as being related, and because past decisions may “reach forward” and affect future decisions in irrational ways.

For example, in a bias referred to as **escalation of commitment**, people invest more and more heavily in an apparently losing course of action so as to justify their earlier decisions. Usually the investments made once this process gets started are disproportionate to any gain that could conceivably be realized, and the level of irrationality becomes particularly pronounced when the project nears completion.<sup>43</sup> For most decision makers, the regret they anticipate for giving up too early on their decisions is not offset by a corresponding regret to lose even more than they have already lost.<sup>44</sup>

Even when costs clearly outstrip benefits, a decision maker may feel many different kinds of pressure to continue to act in accord with a particular decision.<sup>45</sup> For psychological reasons, the decision maker may not want to appear inconsistent by changing course; that is, the person may not want to admit to an earlier mistake. Moreover, particularly where feedback is ambiguous or complex, perceptual distortions such as the expectation effect can make the picture appear more hopeful than is really the case. Because decision makers cannot make perfect predictions regarding future outcomes, there is always the hope that staying the course will pay off. Moreover, many people have been rewarded in past situations for sticking it out. Although rare, such experiences are usually quite memorable (the availability bias). The experience of giving up when it is the appropriate choice often goes unrewarded, at least in the short run, and thus is something people like to forget. Finally, sometimes cost–benefit analyses are abandoned in favor of a win-at-any-cost mentality. The quest to prove one was right from the start takes over, and obsession overcomes better judgment.

### *Factors Limiting Rational Decision-Making Models*

As the decision-making illusions previously described show, the complexity of real-world decision situations often makes rationality impossible to achieve. This can often lead some decision makers to “freeze up” and attempt to avoid making a decision at all costs. Herbert A. Simon, a cognitive scientist and Nobel laureate in economics, has remarked that “the capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose solution is required for objectively rational behavior in the real world.”<sup>46</sup> Simon’s comment on the limits of human intelligence does not seek to condemn humans, but rather to acknowledge the complexity of the environment in which they must operate. Indeed, according to Simon and to others who have followed his lead, the complexity of the real world often overwhelms the decision maker at each step of the rational decision-making process, making complete rationality an impossibility.

One issue that may undermine the rational decision-making model is the fact that rational



models work only if there is general agreement on the definitions of problems, decisions, and decision-making goals that are framed at the outset. Especially in large organizations, such consensus is difficult to achieve. Different individuals, work groups, and departments are likely to rank outcomes in different ways. For example, many blamed Yahoo's recent struggles on slow decision-making processes. Any new product offered at Yahoo has to go through a long series of meetings and approval processes that delays innovation.<sup>47</sup> Indeed, in large, complex organizations, the only problem definitions likely to be widely shared are those so vague as to be almost meaningless. As an example, the box headed "Generic Corporate Vision Generator" shows a generic formula that seems to be the source of most organizations' "vision statements."<sup>48</sup> Whereas such vision statements may be generally palatable, they provide little in the way of guidance for day-to-day decision making.

### GENERIC CORPORATE VISION GENERATOR

To generate your corporate vision, just circle one entry in each set of brackets.

TO BE A [premier, leading, growing, world-class] COMPANY THAT PROVIDES [innovative, cost-effective, diversified, high-quality] [products, services, products and services] TO [create shareholder value, serve the global marketplace, delight our customers, satisfy our stakeholders] IN THE RAPIDLY CHANGING [information solution, business solution, financial solution, consumer solution] INDUSTRY

Another problem for the rational decision-making model is the difficulty inherent in trying to generate an exhaustive list of alternatives and then select the most promising one. Managers often cannot anticipate which actions will lead to which consequences. Because, as Simon points out, most real-world decisions are characterized by uncertainty, managers cannot even speculate on the odds. Under these conditions, they cannot compute expected values, and thus they lack a common measure with which to compare various alternatives. This problem is especially common with nonroutine decisions—that is, decisions that are out of the ordinary. In making these kinds of decisions, no one ever develops enough experience to easily assess the odds associated with any alternative.

Intuitive decision-making processes that result in snap judgments can often be effective when the decision maker has years of experience working with the problem.<sup>49</sup> However, when the decision is unprecedented, one's "gut instincts" can result in decision-making errors that are especially prone to be second-guessed by outsiders who eventually benefit from hindsight bias. For example, in hindsight, many analysts wound up criticizing the \$700 billion bailout that former President Bush granted financial institutions when it became clear that there were no requirements for how the money was to be spent, and no transparency with respect to what the banks actually did with the money.<sup>50</sup> It also became clear that the companies that made the biggest mistakes wound up benefiting most from the bailout.<sup>51</sup> As one CEO notes, when it comes to crisis decision making, "What you don't do is try to solve a crisis by jumping to the wrong solution too early. Seeing the total landscape and trying to instill the need for that is important."<sup>52</sup>

For example, in 2003 Boeing was faced with the decision of either developing its first all-new jetliner in nine years, the 7E7, or hunkering down and just trying to cautiously weather the airline's worst downturn ever. Some members of Boeing's board felt that the \$10 billion cost for designing the new plane was too high, and that the market for large passenger planes was too volatile. They sought to diversify the company and look for minor evolutionary

changes that would allow them to derive small incremental profit improvements from existing lines of business. Others on the board wanted to risk a revolutionary redesign of its passenger aircraft in order to make up for ground lost to Europe's Airbus. These individuals were afraid that Boeing was going to face the same fate as the failed McDonnell-Douglas organization, which, in their words, "frittered away a pretty solid market position by not taking risks."<sup>53</sup> The one-time, highly idiosyncratic nature of this decision precluded any opportunity to calculate any kind of expected value that is required by rational decision-making models. After a painstaking analysis of market data, Boeing eventually decided to take the risk of developing the new plane and, despite setbacks that delayed its introduction, this eventually paid off. In 2007, the aircraft broke all records by selling 369 aircraft to 56 different customers.<sup>54</sup>

In addition, managers are not free to choose among all the choices they may generate. The term **bounded discretion**, first suggested by Simon, refers to the fact that the list of alternatives generated by any decision maker is restricted by social, legal, moral, and cultural norms. For example, Westinghouse developed a culture of low tolerance for risk because many of its products require a safety-first attitude. When organizational leaders tried to make the company more competitive by developing innovative ideas, they ran into a high level of resistance from many of the company's engineers, who wanted to stick to doing what they knew best. Stephen Tritch, the CEO of Westinghouse Electric, noted that in his division, which builds nuclear power plants, "we don't train people to take risks. We train them not to."<sup>55</sup> Thus, as Figure 4.3 indicates, the discretionary area containing acceptable choices is bounded on many sides. The boundaries between each set of limitations and the discretionary area are not clear cut. As a result, decision makers do not always know whether an alternative is in or out of bounds.

In some cases, social norms and traditions may limit one's options, and the "rational decision" may conflict with these customs. For example, in the high-tech industry, it was customary to offer clients and customers rather large incentives for their businesses. One of the well-known incentives was referred to as "Friends and Family IPO Stock Options," a tradition that often led to initial IPO stock prices that were much too low relative to what

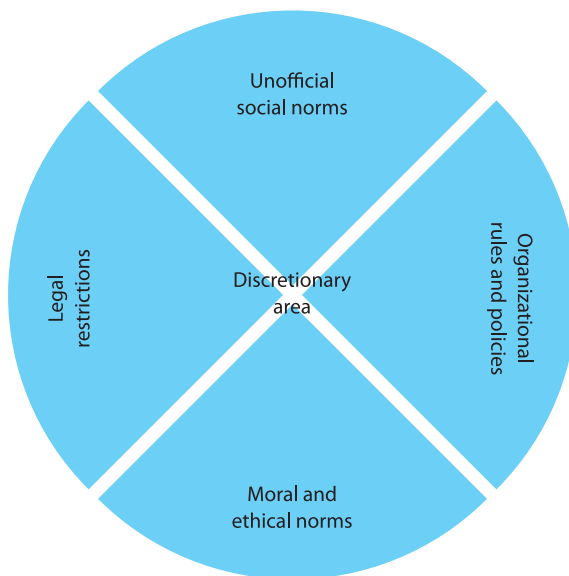


Figure 4.3 The Concept of Bounded Discretion

rational reasoning would demand. Specifically, friends-and-family programs allowed companies that were going public for the first time to distribute as much as 5 percent of their offerings early to whomever they chose. These individuals got to purchase the stock at the original IPO price, whereas everyone else had to wait a day. At one point, tech stocks were jumping an average of 65 percent on their first day of trading, guaranteeing a huge payoff to those who were part of the friends-and-family programs, but a rather large disadvantage to shareholders who were outside the loop. As one commentator noted, “If it weren’t for friends and family programs company executives would have pushed for a higher price offering,” and this cost these companies more than \$60 billion.<sup>56</sup> Although this example shows how the customs of a company or industry can harm the larger society, in other cases the customs and traditions of the larger society can work to harm the interests of companies and industries.

When organizational decision makers choose alternatives that fall outside the legal or ethical boundaries, this often triggers whistleblowers to go public with information that can be highly damaging to the company. Many different factors may motivate such whistleblowers, but, regardless of the motivation, the negative publicity and legal costs associated with organizations that are guilty of these kinds of breaches are significant. Indeed, the passage of the new Sarbanes-Oxley Corporate Reform Act seeks to protect these kinds of whistleblowers, making it illegal for companies to threaten or harass them. This Act requires organizations to establish internal procedures for hearing whistleblower complaints, and any executive who is found to retaliate against a whistleblower can be sentenced to up to ten years in a federal prison.<sup>57</sup>

Despite the passage of this law, however, it is still the case that most whistleblowers face retaliation. For example, after uncovering safety violations at Northwest Airlines during the mechanics strike, Marc Lund filed a formal report with the Federal Aviation Administration (FAA). His reward for this was to be fired because at that time there was pressure in the agency to not report violations that would cause big expenses for the struggling airline carriers.<sup>58</sup> Similarly, in the field of medicine, many have argued that there is a culture of secrecy that mitigates whistleblowing by nurses and technical assistants, that seeks to protect doctors and administrators from costly lawsuits. Indeed, a recent study found that roughly two of three hospital staffers covered up a hospital error for fear of retribution.<sup>59</sup> In order to encourage more whistleblowing, some have suggested that those who engage in this act be financially compensated, perhaps receiving 15 to 30 percent of damages recovered or punitive damages. As one safety advocate notes, “They still lose their jobs, but at least they’re paid to go into retirement.”<sup>60</sup>

Finally, the rational decision-making model assumes that one can evaluate the implemented alternative by checking the actual outcome against the initial intentions. In many contexts, this assumption simply does not hold. Most business situations are complex, and many factors other than the chosen alternative can influence the ultimate outcome. Thus the “right” choice may not invariably lead to the desired outcome. Such decision-making contexts, in which the link between actions and outcomes is tenuous and difficult to predict, are sometimes called noisy environments.

In noisy environments, we can make sense of action–outcome links only by making many observations of the same outcomes after the same actions. If one makes the same decision numerous times, noisy influences factor themselves out, and the true nature of the action–outcome link becomes clearer. Unfortunately, most decision makers in noisy environments fail to stick with one action long enough to sort out the effects of the chosen action from the effects of random influences. This lack of consistency in decision making means that the person moves from one action to another without ever learning much about the action–outcome link associated with any one specific action.<sup>61</sup>

Thus the rational decision-making model can provide helpful guidance in only a limited number of places. It may suggest how to structure routine decision making where everyone agrees on the desired outcomes and the best methods for attaining those outcomes, and where few outcomes and alternatives must be considered. Because the various factors may render the rational decision-making model less useful in many contexts, however, alternatives to the model have been suggested.

**The Administrative Decision-Making Model**

One of the most influential alternatives to the rational decision-making model is Herbert Simon’s administrative decision-making model (Figure 4.4). Simon’s model is intended to paint a more realistic picture of the way managers make most decisions.<sup>62</sup> According to Simon, the rational decision-making model may outline what managers *should* do, but the administrative model provides a better picture of what effective managers *actually* do when

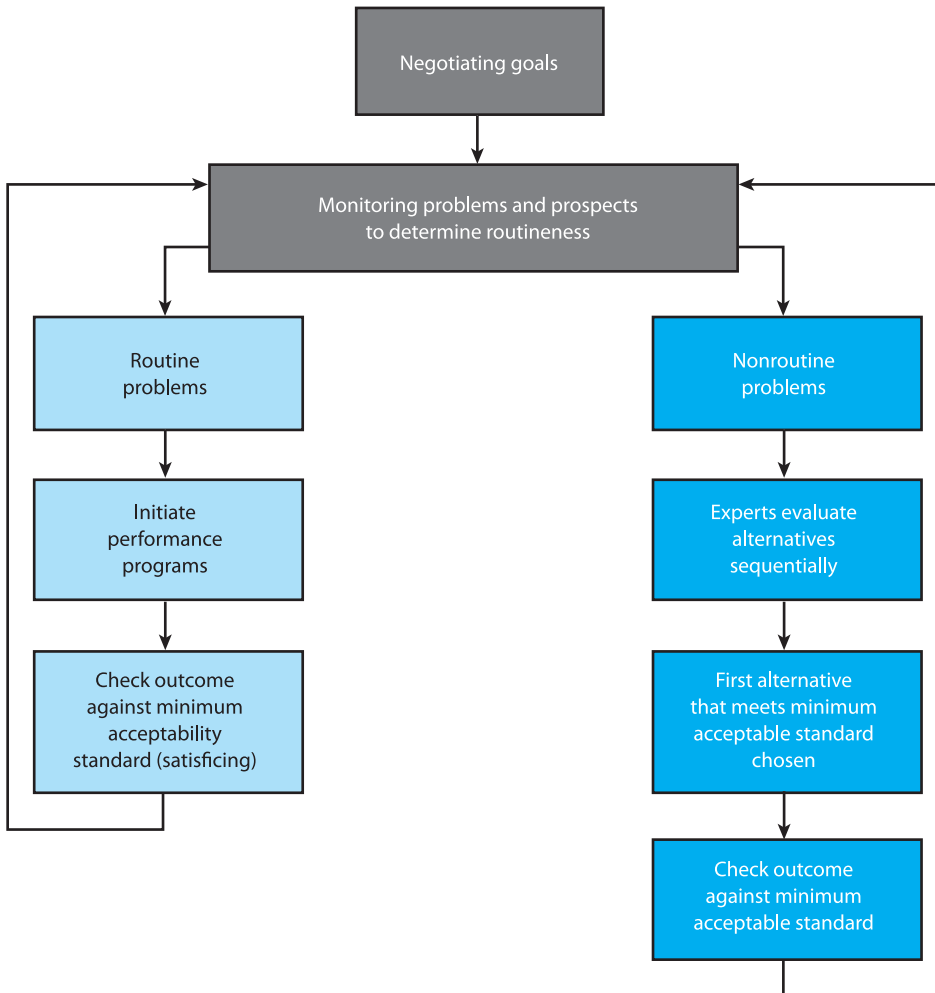


Figure 4.4 The Administrative Decision-Making Model

Source: Based on J. G. March and H. A. Simon, *Organizations* (New York: Wiley, 1958).

strict rationality is impossible. Simon's model differs from the rational model in several important ways.

One difference has to do with satisficing versus optimizing. According to Simon, *optimal* solutions require that the final decision be better than all other possible alternatives. For all the reasons discussed earlier, such optimality is simply not possible most of the time. Instead of striving for this impossible goal, organizations may try to find **satisficing** solutions to their problems. Satisficing means settling for the first alternative that seems to meet some minimum level of acceptability. Needless to say, it is much easier to achieve this goal than to strive for an optimal solution; indeed, Simon evokes the comparison between finding a needle in a haystack (satisficing) and finding the biggest, sharpest needle in the haystack (optimizing).

In searching for satisficing solutions, managers further simplify the process by considering alternatives sequentially rather than simultaneously. Instead of first generating a list of all possible alternatives and then comparing and contrasting each alternative with all the others, the decision makers evaluate each alternative, one at a time, against the criteria for a satisficing outcome. The first satisfactory alternative identified in this way is chosen, and the manager moves on to other problems.<sup>63</sup>

For example, a firm that needs to downsize by reducing its total number of employees faces more than a dozen options for accomplishing this objective. Rather than compare the expected results for every possible downsizing means with every other possible means, the firm's managers may simply consider initiating an early retirement program. If management implements such a program and it achieves the desired results, no further alternatives need be considered. If the plan does not work, some other reasonable alternative, like a hiring freeze, may be tried as well. If this course of action fails, it may be followed by yet another downsizing attempt, such as laying employees off according to seniority.

### Reducing Decision-Making Errors

Given our knowledge about the limits to rationality, it is possible to identify many different means of reducing errors in decision making.

First, the main problem inherent in many decision-making biases (for example, loss aversion, availability bias, and base rate bias) is that the judges oversimplify information processing and take decision-making shortcuts. One good means of eliminating this problem is to provide decision makers with aids that will force them to ask all the right questions, get all the right information, and then process this information in all the right ways.

Computerized expert systems represent one excellent decision aid. These systems are typically developed by asking a team of experts, "How would you go about making such a decision?" and then recording every piece of information they request as well as the way in which they process those data. The interview findings are then turned into a computer program that performs the same function for a relatively naive decision maker, who is prompted to ask the right questions by the program itself. An expert system turns what was formerly a qualitative, subjective process into a more mechanical, objective process that has higher validity for making personnel selection decisions.<sup>64</sup> The use of these kinds of systems is growing in organizations almost as fast as the adoption of computer technology itself. Although they will never replace the human decision maker, such systems may be instrumental in helping people overcome built-in judgment biases.

For example, Home Depot was having a difficult time fairly evaluating female candidates for traditionally masculine jobs. To solve this problem, the company developed an automated hiring and promotion system that helped managers ask the right questions and make decisions that had less adverse impact on women. Now when a Home Depot manager needs to make a

hiring or promotion decision, the program offers a list of prescreened candidates as well as a set of interview questions, preferred answers, and advice to give the job seeker if that person lacks the right qualifications. This system has helped Home Depot develop a much more integrated workforce. Since its inception, the number of female managers has increased by 30 percent and the time required for managers to make such decisions has decreased. Similar types of expert systems for personnel selection and promotion have been developed at Target, Publix Supermarkets, and Hollywood Video.<sup>65</sup>

Even though expert systems may help simplify routine decision making, uncertainty in the environment makes it impossible to develop perfectly detailed scripts that will be applicable everywhere. At the highest level of any field, a need for discretion or individual authority on the part of decision makers persists. Consequently, organizations also need to hire or develop specialized areas of expertise that can be managed by one or more specialized staff members. The range of discretion of such experts tends to be limited to tightly defined areas, and the experts become the decision makers or internal consultants for different subareas. Using experts in decision making enables people with special expertise in an area to devise more accurate and more detailed scripts. In this way, complexity can be handled more effectively by being broken up into discrete, manageable chunks—jobs—that can be tackled by individuals working alone. The holder of an individual job typically focuses on one very narrow area of organizational problem solving. The ability of the leader to accurately weigh different sources of information when rendering the group's judgment has repeatedly been found to be a critical factor in determining group decision-making accuracy.<sup>66</sup>

As noted earlier in the discussion of the perceptual process, chunking (breaking up jobs into small parts) reduces the burden on any one individual. Of course, each person's contribution must then be integrated with everyone else's contribution. Chunking does not change the fact that organization members are interdependent, and it is unrealistic to think that one expert can operate unaffected by others or that one set of programs can be activated independently of others. In integrating groups, the complexity of planning is greatly simplified by **loosely coupling** the different parts—that is, by weakening the effect that one subgroup has on another so that each subgroup can plan and operate almost as if the other were not present.<sup>67</sup>

With respect to dynamic influences on decision making, one means of trying to minimize judgment errors caused by escalating commitment is to develop separate project development and project evaluation teams.<sup>68</sup> Because the evaluation team likely will not share the sense of ownership felt by the development team, this structure can eliminate many of the forces that can lead to feelings of psychological entrapment. It is also a good idea to initially set up goals, timetables, and reevaluation parameters that spell out under what conditions the project will be terminated. Establishing these parameters early makes later judgments more rational and coldly calculated. Once a project is begun, however, sunk costs may entice workers to inappropriately reevaluate the level of loss they are willing to risk.

## Creativity in Decision Making

One elusive quality essential to all decision making is creativity. Creative decisions consist of choices that are new and unusual but effective. Neither the rational nor the administrative decision-making model deals with the issue of producing creative decisions, nor does guarding against errors in group decision making necessarily guarantee that creativity will result. Indeed, some aspects of everything discussed in this chapter so far will make the generation of creative solutions to problems less—rather than more—likely. For example, strictly adhering to the demands of expert systems will rarely result in innovation. In this last

section of the chapter, we emphasize the creativity process and describe how organizations can enhance creativity by selecting appropriate people or by managing in the appropriate fashion.

### The Creative Process

Studies of people engaged in the creative process and examinations of the decision-making processes of people who are famous for their creativity suggest that a discernible pattern of events leads up to most innovative solutions. Most creative episodes can be broken down into four distinct stages: preparation, incubation, insight, and verification (Figure 4.5).

Contrary to what most people think, creative ideas rarely come out of the blue. More often than not, innovations are first sparked by a problem or perceived need for which no current solution or product seems applicable. The current knowledge base or some current product is then stretched or integrated in some way that is so distinctive that the idea takes on a life of its own. For example, digitalized music and flash drives existed long before the iPod; however, the iPod, which is a glorified flash drive with a singular purchase, is still perceived as being an “invention” that solved the need for easily transportable entertainment.<sup>69</sup>

Because creative decision making resembles other decision-making processes in this way, it should not surprise you to learn that preparation, the first stage in the creative process, requires assembling materials. Analogous to the rational model’s stage of generating alternatives, preparation is characterized by plain, old-fashioned hard work. In attempting to solve the problem, the creative person immerses himself or herself in existing solutions to the problem, usually to the point of saturation.

The second stage of creativity, incubation, differs greatly from steps in other decision-making models. Rather than reaching a decision immediately after assembling and evaluating relevant materials, creative decision makers enter a period during which they seem not to expend any visible effort on the problem. Sometimes out of frustration or sheer exhaustion they may stop working on the problem temporarily and turn to other things. Indeed, some have argued that, if such a stage does not evolve naturally, it should be forced on decision-making groups if the goal is to arrive at a creative solution.<sup>70</sup>

After a person spends some time in the incubation stage, the solution to the problem typically manifests itself in a flash of inspiration, or insight. Usually, the person is engaged in some other task when this insight comes, which reinforces the false impression that bold,

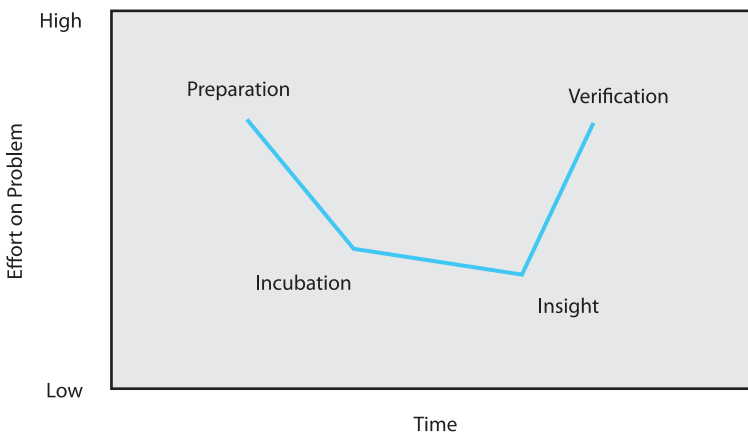


Figure 4.5 Steps in the Creative Decision-Making Process

creative ideas come out of the blue. Without the prior two steps, this flash of inspiration will not be forthcoming; however, it does seem that a state of relaxation, rather than obsession, promotes creative thinking.<sup>71</sup>

The fourth stage of the creative decision-making process is solution verification. In this step, the solution formulated in the insight stage is tested more rigorously to determine its usefulness for solving the problem. This stage in creative decision making closely resembles the rational decision-making model's evaluation stage. Typically, the verification process takes a long time. In fact, it resembles the preparation stage in the amount of hard work it requires. People often resist change, particularly if they have a large investment in traditional ideas and methods. They must be convinced, which is rarely possible without independent verification of the new approach.

### **Creative People**

Certain characteristics of individuals seem to be associated with creative endeavors. First, a modest relationship appears to exist between creativity, general cognitive ability, and the specific capacities of reasoning and deduction. Indeed, some minimum threshold of intelligence seems to be necessary for creative work. Once that minimum threshold is reached, general intelligence becomes less critical and hard work is probably more important.

Personal characteristics such as interests, attitudes, and motivation are more important than intelligence in distinguishing creative people from the general population. Creative people generally set high goals for themselves, which may make them dissatisfied with the status quo and current solutions to problems. Indeed, dissatisfaction seems to be a general precursor to creative activity in that people are much more likely to be creative when they are in a bad mood, relative to a good mood.<sup>72</sup> Their high levels of aspiration may also explain why creative people often do not seem to feel loyalty to a particular employer but instead remain highly mobile, moving from company to company. Like most valued commodities, creative talent is highly sought after, and tends to develop unusual social networks. Thus a company may find it difficult to hold on to its creative people.<sup>73</sup>

Some have suggested that the creative person is unusually persistent and has a high energy level. These characteristics are probably particularly useful in the stages of preparation and verification, which demand hard work carried out over long periods of time. Persistent people will stick with something despite encountering obstacles and setbacks, and people with a lot of energy can continue to work diligently for extended periods. This persistence is often fueled by strong perceptions of creative self-efficacy, and recent research has produced a new measure that specifically taps individual differences in this critical trait.<sup>74</sup>

Finally, age seems to be related to creativity. In one classic study of people recognized for their creativity, one consistent finding was that, regardless of the field in which the person did his or her work (the fields studied included mathematics, physics, biology, chemistry, medicine, music, painting, and sculpture), creativity peaked between ages 30 and 40.<sup>75</sup>

### **Creativity-Inducing Situations**

Selecting people who have characteristics that seem to be related to creativity is not the only option for organizations that seek to increase their innovativeness. Providing specific and difficult goals and firm deadlines actually seems to stimulate creative achievement, as long as the deadlines are far enough into the future. If the deadlines are set too short, this can create time pressure that stifles creativity, as people begin to look for the simplest and quickest solution rather than a more complex and creative solution.<sup>76</sup>



Some firms even set goals for creativity. For instance, 3M has historically set a goal that 35 percent of its total revenues should come from new products developed in the past four years. Of course, focusing people on coming up with innovative techniques, as opposed to cranking out products with the existing technologies, sometimes comes at the expense of short-term productivity. For example, one of 3M's rules is that each employee should devote 15 percent of his or her time to reading and learning about recent developments that have nothing to do with the employee's primary project.<sup>77</sup>

Certain characteristics of organizational culture (see Chapter 14) may also be related to creativity.<sup>78</sup> First, the degree to which organizations recognize and reward creativity is of paramount importance. Many organizations, either unwittingly or knowingly, place more emphasis on following existing written rules and procedures than on experimenting with new procedures. A culture that promotes creativity must ensure not only that innovativeness is reinforced, but that experimentation leading to failure is not punished. Executives like James Burke, CEO of Johnson & Johnson, attempt to create a climate where the risks of innovation are minimal. Burke, in fact, has even told his employees, "We won't grow unless you take risks. Any successful company is riddled with failures. There's just no other way to do it."<sup>79</sup>

Although they need not reward every failure, companies that seek to encourage innovation must lower the cost of conducting a "failed experiment." Employees need to know that risk taking is perceived as being worth making a few mistakes—especially if the size of the mistake is small and the damage can be contained. Indeed, although we will talk more about this in a subsequent chapter, transformational leaders who employ emotional motivational appeals seem to help promote innovation.<sup>80</sup> This is especially the case when the leader is managing a cross-functional team of narrow specialists who have a tendency to lose the "big picture" perspective required for implementing new ideas.<sup>81</sup>

Because much creativity comes out of collaborative efforts carried out by different individuals, organizations should promote internal diversity and work environments that enhance the opportunity to exchange ideas.<sup>82</sup> If all members of a group share the same interests, experiences, strengths, and weaknesses, they will be less likely to generate new ideas than if they have divergent backgrounds and capabilities. For example, Lockheed's Skunk Works R&D subsidiary, which is famous for making several aerospace technological breakthroughs (such as the U-2 "Blackbird" spy planes and the F117A Stealth fighter plane), takes a team-based approach to production. Each team is headed by a manager with wide latitude in recruiting in-house specialists from an array of scientific and engineering backgrounds. The teams are isolated from Lockheed's sprawling bureaucracy but can have direct contact with their "customer" (the U.S. Department of Defense). In a time of shrinking defense budgets, the Skunk Works plant remains one of Lockheed's most profitable units. It achieves this goal only by continuously pushing the envelope of technological innovation.<sup>83</sup>

Finally, because different organizations do different things in different places, exposing people to varying kinds of experiences, such as foreign assignments, professional development seminars, or extended leaves, may help shake up overly routine decision-making processes. The notion that difference and variety encourage creative thinking receives some support from the finding that organizations that emphasize external recruiting seem to be more innovative than firms that promote from within. Mixing employees from different geographical regions can also foster a climate of creativity.<sup>84</sup>

## Summary

A thorough understanding of the perceptual process by which people encode and make sense out of the complex world around them is critical to those who would manage organizational

behavior. The very existence of perceptual illusions proves that what we perceive is not always a very close approximation of objective reality. At the *attention stage* of the perceptual process, we select a small subset of all information available for subsequent processing. The degree to which any stimulus attracts our attention is a complex function of characteristics of the object and of ourselves. At the *organization stage* of the information-processing cycle, information is simplified. We convert complex behavioral sequences into *scripts* and represent people by *prototypes*. A number of biases, including *stereotyping*, can creep into this complex process.

In the decision-making process, we use the information from the perceptual process to evaluate an object, person, or event. This evaluation, once made, affects our decisions, behaviors, and subsequent perceptions. Many features of people and situations need to be considered when trying to increase the accuracy and creativity of decision making.

## Review Questions

1. List a set of traits that would make up the prototype for a terrorist, a hippie, an absent-minded professor, and a card-carrying member of the American Civil Liberties Union. Recalling Chapter 3, is your list dominated by ability or personality characteristics? What kinds of abilities or personality characteristics are most heavily represented? What does this exercise tell you about how prototypes are developed and in what ways they are most likely to be accurate?
2. Sometimes the same behavioral episode in an organization—for example, a fight among co-workers, a botched work assignment, or an ineffective meeting—can be organized perceptually along the lines of either a script or a prototype. How might the choice of schema affect what occurs later in the process of interpretation or judgment?
3. Escalation of commitment to a failing course of action has been widely researched, and it is easy to think of many examples of this kind of mistake. The flip side of this mistake, however, is giving up too soon, which has not been studied as much and for which it is more difficult to think of examples. Why can't we recall such events? How might researchers in this area be victims of availability bias?
4. Compare and contrast the decision-making process associated with rational decision making, administrative decision making, and creative decision making. At what points do these three descriptions of decision making diverge most? What implications does this divergence have for decision makers who attempt to follow the wrong model?



# Work Motivation and Performance

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One way for an organization to gain a competitive advantage over its rivals is to generate a more motivated workforce. **Motivation** refers to the energy a person is willing to devote to a task. A person who is highly motivated will start work sooner and leave work later relative to someone who is unmotivated, and may come in on weekends to finish up tasks that were left undone during the week. While engaged at work, a highly motivated person will work faster, take fewer breaks, and be less easily distracted relative to someone who is unmotivated. A person who is highly motivated will go out of his or her way to learn new things to improve future performance and help co-workers when the workload within the group gets unbalanced. Managers who can create high levels of motivation can get more work out of five people than their less inspiring counterparts can get out of ten, and this is a form of competitive advantage that is hard to deny.

For example, in 2008, the company Netflix, an internet based distributor of movies and videos, was facing tough competition on multiple fronts. First, its traditional rival, Blockbuster, was growing at a record pace. Second, retailing giant Wal-Mart had decided a few years earlier to offer its own web-based movie rentals, and was making serious inroads with Netflix customers. Third, Apple's ability to offer digital streaming service was constantly improving and offered yet another substitute for the service provided by Netflix. In order to successfully compete with these powerful forces, the strategy chosen by Netflix was to build the most motivated and talented workforce that could outperform these larger rivals. In order to attract and motivate their employees, Netflix constantly paid the highest wages, and gave employees a wide degree of choice in terms of how to structure their rewards in terms of cash, stock, benefits, and vacation time. People were also given freedom to schedule their own work and determine how best to do it, subject to accomplishing very specific and difficult goals. The price that employees paid for all this compensation and freedom, however, was that they were held accountable for those goals, and if they failed to meet them they were let go. As CEO Reed Hastings noted, "at most companies average performers get an average raise, but at Netflix, they get a generous severance package."<sup>1</sup>

Although organizations have always tried to do more with less, increasingly this means doing more work with fewer, but better, employees. For example, many compared the recent economic downturn to the great depression of the 1930s, and indeed there were many parallels. Extended periods of falling housing prices, stressed financial systems, and large numbers of layoffs were characteristic of both time periods. One distinctive difference, however, is that, unlike what happened in 1930, in the face of this economic downturn annual earnings of those with jobs actually *increased* by close to 4 percent. Employers were offering raises to one set of workers at the very same time as they were letting other workers go,

essentially “thinning the herd” in their effort to ride out the economic downturn. Tara Darrow, spokesman for Starbucks, summed up this strategy best when she announced in 2008 that her company was cutting jobs but raising wages, noting that “we have to take care of our best and most productive employees and keep them engaged.”<sup>2</sup>

One way to try to create motivation is through rewards, and perhaps the easiest thing to say to a manager, *in theory*, is that he or she should “pay for performance” or “link rewards to accomplishment.” Perhaps the most difficult thing to do, *in practice*, is to implement this advice in a manner that does not backfire. For example, in an effort to reduce employee healthcare costs, Whirlpool offered a special incentive, \$500 in the form of non-smoker discounts. By linking the reward to smoking cessation, the company was trying to motivate people to quit smoking. Unfortunately, in 2008, the company had to fire 40 workers at its Evansville, Indiana plant who were caught on tape smoking in designated locations outside the plant despite having signed forms claiming they were non-smokers.<sup>3</sup>

We will return to this example from time to time in this chapter to illustrate certain points regarding the motivation process and how it can go wrong, even by those who start out with the best intentions. Although the problems with incentives for non-smoking may seem like a new and unique case of a motivation system gone bad, in fact the history of management is littered with motivational interventions that sound good and simple in theory but then get “gamed” by experienced and sophisticated employees who do not always have the best interests of shareholders, co-workers, or management at heart.

The purpose of this chapter is to introduce and discuss the topic of worker motivation and performance. Given the centrality of creating and maintaining high levels of motivation, it should come as no surprise that many, many theories deal with this topic. Indeed, the sheer number of theories of motivation that exist can sometimes obscure rather than promote understanding and application. The complexity of this issue sometimes drives confused managers toward fads and overly simplistic approaches that promise much and then deliver little. In fact, the motivational speaker business is a billion-dollar industry littered with so-called “experts,” whose only claim to fame, in some cases, is failure. For example, Bill Bartmann, the former CEO of Commercial Financial Services (CFS), was indicted on 57 counts of fraud, conspiracy, and money laundering, but now works as a motivational speaker despite this history. Indeed, as one industry analyst has noted, “the motivational speaker industry ranks right up there with car salesman.”<sup>4</sup>

We will try to avoid this problem in two ways. First, rather than try to comprehensively cover every theory of motivation, we will focus our attention on a subset of five theories: expectancy theory, need theory, learning theory, self-efficacy theory, and goal-setting theory. Second, we will develop an overarching model to clarify how the theories relate to each other and to show how each specific theory is best for describing a certain aspect of the overall motivation process. This model describes four concrete steps that need to be taken in order to motivate people, and thus specifically addresses how to apply what we have learned from research on these theories in real organizational contexts. Managers who learn and apply this model can take four steps forward in their attempts to gain competitive advantage in product and labor markets.

## A Model of Motivation and Performance

### Expectancy Theory

The model of motivation developed in this chapter is an elaboration of *expectancy theory*, particularly as it was extended by Lyman Porter and Edward Lawler.<sup>5</sup> Expectancy theory is a

broad theory of motivation that attempts to explain the determinants of workplace attitudes and behaviors. Three major components underlie expectancy theory: the concepts of *valence*, *instrumentality*, and *expectancy* (sometimes collectively known as *VIE* theory).

The concept of **valence** is based on the assumption that, at any given time, a person prefers certain outcomes to others. Valence measures the satisfaction that the person anticipates receiving from a particular outcome. Outcomes can have positive, negative, or zero valence. An outcome has a positive valence when a person would rather attain it than not attain it. When a person is indifferent to attaining an outcome, that outcome is assigned a valence of zero. If a person prefers *not* to attain the outcome, the outcome is said to have a negative valence. In our earlier example of Netflix, high pay and high degrees of freedom have positive valence for most workers, and hence this attracts top talent to Netflix and motivates them to work harder relative to what they might do for other employers. On the other hand, the \$500 smoking cessation incentive that Whirlpool offered was not high enough to actually motivate people to quit smoking, but it was high enough to get them to falsify documents and lie to the company.

From a motivational perspective, it is important to distinguish between valence and value. *Valence* refers to *anticipated* satisfaction. *Value* represents the *actual* satisfaction a person experiences from attaining a desired outcome. With experience, someone might discover that a discrepancy exists between the anticipated satisfaction from an outcome (its valence) and the actual satisfaction that it provides (its value).<sup>6</sup> When this disparity occurs, a reward may eventually lose its motivational value. For example, if a person comes to believe that “money cannot buy happiness,” then the motivational values of financial incentives may quickly wane.

**Instrumentality** is a person’s belief about the relationship between performing an action and experiencing an outcome. It is sometimes referred to as a *performance–outcome expectation*. Determining a person’s instrumentalities is important because that individual will likely have a strong desire to perform a particular action only when both valence and instrumentality are perceived as high. Thus, to understand motivation, we need to know more than the satisfaction an individual expects as the consequence of attaining a particular outcome—we need to know what the person believes he or she must do to obtain or avoid that outcome. For example, as we saw in the famous Enron case, if a corporate executive believes that fraudulent accounting practices will raise the price of the stock, he or she may become motivated to engage in this type of behavior. On the other hand, if this same person believes that he or she will be arrested and placed in prison for this action, then he or she may search for other means of raising the stock price.

The third element of expectancy theory is the concept for which the theory is named: expectancy. **Expectancies** are beliefs about the link between making an effort and actually performing well. Whereas knowledge about valences and instrumentalities tells us what an individual *wants to do*, we cannot anticipate what the individual will *try to do* without knowing the person’s expectancies. For example, even if a middle manager in a large corporation is holding a large set of options, this person may not believe that extra levels of effort on his or her part are likely to affect something as distant as the stock price. That is, even though there is a clear *performance–outcome linkage* (instrumentality) between raising the stock price and enhancing the value of his or her personal portfolio, the manager may not believe that he or she can do anything that will affect the stock price. This means that there is a weak *effort–performance linkage* (expectancy). Even if the manager came in and did extra work on the weekend 52 times a year, would this really impact the company’s stock price? If the answer to this question is no, then the motivational value of the stock options for this person is not very strong.

Thus expectancy theory defines motivation in terms of desire and effort, whereby the achievement of desired outcomes results from the interaction of valences, instrumentalities, and expectancies. Desire arises only when both valence and instrumentality are high, and effort comes about only when all three aspects are high.

### Supplemental Theories

Two primary reasons explain why, to build a model of motivation and performance, we need to supplement expectancy theory with other motivation theories. First, a number of other theories deal in much more detail with certain specific components of motivation. As a consequence, they help to elaborate on expectancy theory. *Need theories* provide important insights into how valences develop and how they might change over time. *Learning theories* explain how perceptions of instrumentality arise. *Self-efficacy theory* describes the origins of effort–performance expectancies and the ways in which they are maintained. Second, expectancy theory must be extended to explain outcomes other than desire and effort. To predict performance, expectancy theory requires information about human ability, goals, and strategies. For these reasons, along with expectancy theory, our model will incorporate ideas from the need, learning, self-efficacy, and goal-setting theories.

### Overview of the Model

The model of motivation and performance built in this chapter consists of *five components* put together in *four steps* to explain *three outcomes*. Figure 5.1 presents this model graphically; it serves as a road map for the remainder of this chapter.

One component (abilities) was explained in Chapter 3 and will be touched on only briefly here. Three other components are valence, instrumentality, and expectancy. These have already been defined, but we will elaborate on each using need, learning, and self-efficacy theories. The final component is accuracy of role perceptions, particularly as described via goal-setting theory.

### Valence: Need Theories

People differ greatly in their personal preferences. For example, a recent study of MBAs found that the relationship between changing jobs and getting higher salaries was strong and positive among white males, but close to zero among women and minorities.<sup>7</sup> White males tended to place a high value on pay and would change employers only if some higher level of compensation was offered. In contrast, women and minorities were more likely to change employers for other reasons; they did not use pay as the single overarching factor driving their mobility. Thus the different valences of these groups can help explain their different behaviors.

The goal for employers is to find exactly what drives each employee and then, as far as possible, build reward systems around these drivers, taking advantage of each person's unique sets of interest and values. In fact, this process is getting so sophisticated that new statistical modeling software is available to track and exploit the different values people have, so that employers can tailor the money spent on human resources in ways that maximize their motivational value. For example, one worker may prefer to receive compensation in the form of retirement support, whereas another may prefer healthcare coverage; innovative software programs are available that support organizational efforts at customizing their reward systems to the idiosyncratic value systems of each employee.<sup>8</sup> When it comes to understanding how

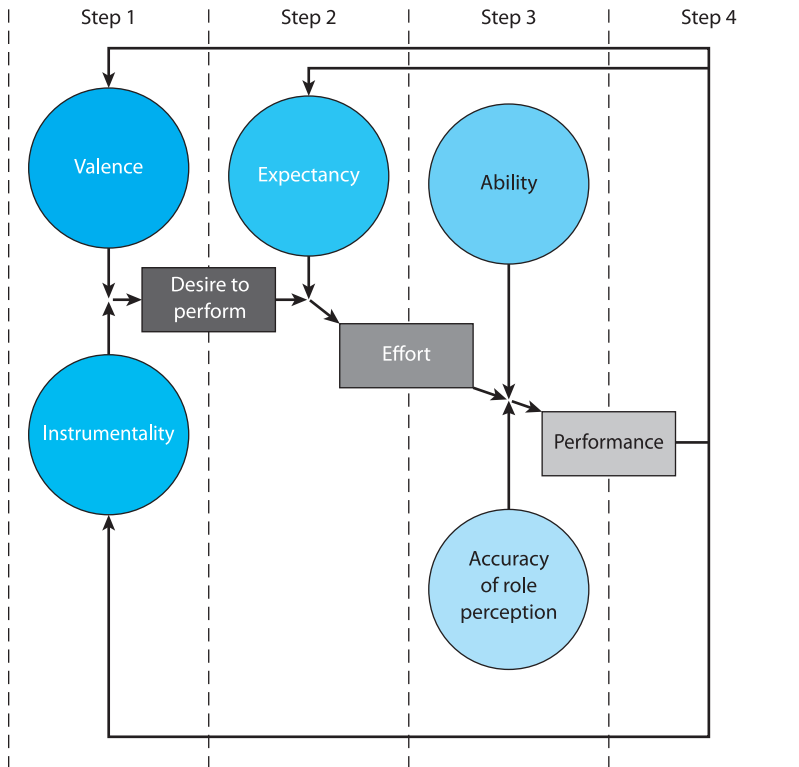


Figure 5.1 A Diagnostic Model of Motivation and Performance

valences originate and why they differ among people, need theories can prove especially informative.

### Maslow's Need Hierarchy

Abraham Maslow was a famous clinical psychologist and a pioneer in the development of need theories. Little existed in the way of empirical, scientific studies of motivation when Maslow began work, and hence he based his own theory on 25 years of experience in treating individuals with varying degrees of psychological health. Based on this experience, Maslow's need theory proposed the existence of five distinct types of needs: physiological, safety, love, esteem, and self-actualization. These needs, according to Maslow, are genetically based and characteristic of all humans. Moreover, he argued, these five needs are arranged in the hierarchy shown in Figure 5.2 and influence motivation on the basis of need **prepotency**. Prepotency means that needs residing higher in the hierarchy can influence motivation only if needs residing lower in the hierarchy are already largely satisfied.

At the lowest level of Maslow's need hierarchy are physiological needs such as hunger and thirst. According to Maslow, these physiological needs possess the greatest initial prepotency, and if these needs are not met they become the sole drivers of motivation. Once these needs have been mostly gratified, however, they no longer serve as strong motivating elements. Under these conditions, second-level safety and security needs increase in importance. Safety and security needs relate to the acquisition of objects and relationships that protect their



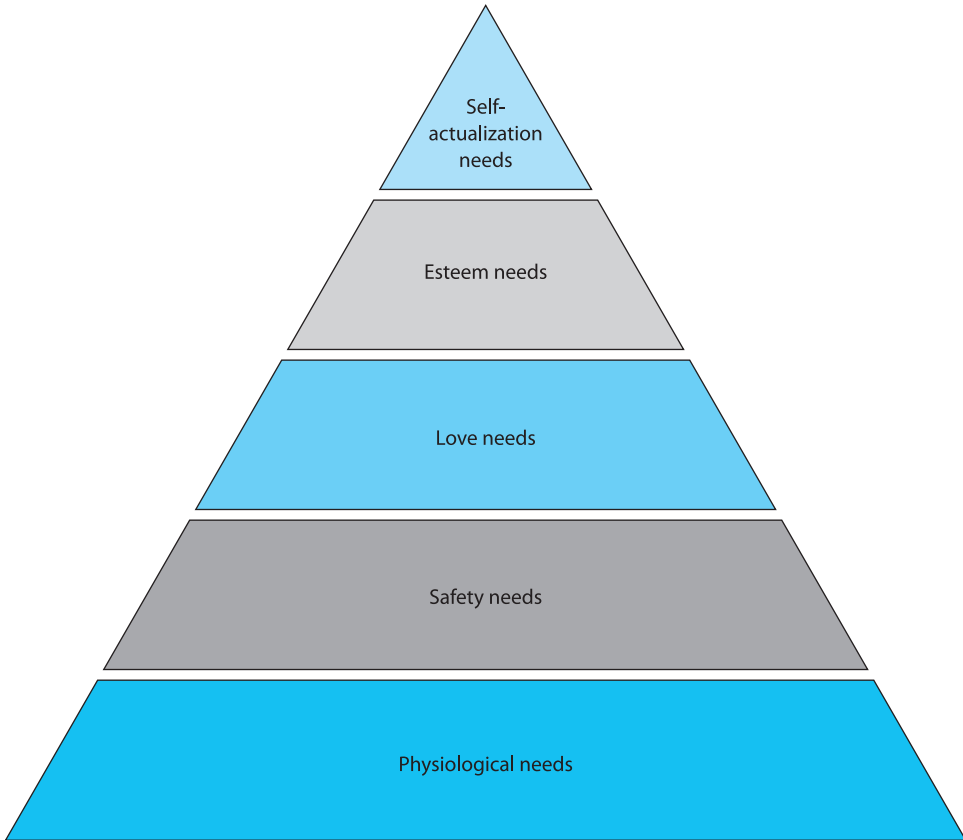


Figure 5.2 Maslow's Need Hierarchy

possessor from future threats, especially threats to the person's ability to satisfy his or her physiological needs. In organizational contexts, the need for job security is often an important motivator, and people are often willing to forgo many other rewards like high pay in return for security. This seems to be especially true of individuals who grew up in families where their parents never secured stable employment histories.<sup>9</sup>

If both physiological and safety needs are mostly fulfilled, love needs become prepotent. Maslow used the term *love* in a broad sense to refer to preferences for affection from others as well as a sense of belongingness and contributing to one's community, broadly defined. The need for friends, family, and colleagues falls within this category, and in many cases one might be motivated to stay at a company largely because all of one's friends work there and hence it serves as a social outlet. The term "**prosocial motivation**" is often used explicitly to capture the degree to which people are motivated to help other people.<sup>10</sup> When people believe that their work has an important impact on other people, they are much more willing to work longer hours.<sup>11</sup> This prosocial motivation could be directed at co-workers and has been found to relate to helping behavior.<sup>12</sup> This form of motivation can also be triggered by recognizing that one's work has a positive impact on those who benefit from one's service, such as customers or clients.<sup>13</sup> In contrast, when one's social needs are thwarted, people often react negatively and in self-defeating ways that drive others further away from them.<sup>14</sup>

At the fourth level in Maslow's need hierarchy are esteem needs. Maslow grouped two distinct kinds of esteem within this category. Social esteem consists of the respect, recognition, attention, and appreciation of others. Self-esteem reflects an individual's own feelings of personal adequacy. Consequently, esteem needs can be satisfied partly from external sources and partly from internal sources. For many people, pay, income, and acquiring wealth have more to do with satisfying needs for esteem than for meeting physiological or security needs, and this can often trump prosocial motivation. For example, when asked to set a goal for how many hours of prosocial volunteer work they were willing to provide, people who were reminded of their hourly wage (or salaried workers asked to calculate their hourly wage) were less willing to "spend" time volunteering.<sup>15</sup>

The last set of needs, at the top of Maslow's hierarchy, consists of self-actualization needs. According to Maslow, if all needs beneath self-actualization are fulfilled, a person can be considered generally satisfied. In Maslow's words, self-actualization "might be phrased as the desire to become more and more what one is, to become everything that one is capable of becoming."<sup>16</sup> Unlike all the other needs identified by Maslow, self-actualization needs can never be fully satisfied. Hence, the picture of human motivation drawn by this theory emphasizes constant striving as well as constant deprivation of one sort or another.

Perhaps owing to its simplicity, Maslow's need theory has gained wide acceptance among managers and management educators. Maslow failed to provide researchers with clear-cut measures of his concepts, however, and his theory has never received much empirical support.<sup>17</sup> Still, it holds interest for us primarily because of its place in history as one of the earliest motivation models and as a precursor to more modern theories of motivation.

### **Murray's Theory of Manifest Needs**

Henry Murray's theory of manifest needs defines needs as recurrent concerns for particular goals or end states.<sup>18</sup> Each need consists of two components: the object toward which the need is directed (for example, achievement or autonomy) and the intensity or strength of the need for that particular object (for example, strong versus weak). Murray proposed more than 20 needs, several of which are described in Table 5.1.

Because Murray's needs are not arranged in any hierarchical fashion, the theory offers considerable flexibility. Unlike Maslow, Murray held that an individual could be motivated by more than one need simultaneously, and he also suggested that needs could sometimes conflict with each other. Also unlike Maslow, who viewed needs as innate and genetically determined, Murray regarded needs as something people learned from interacting with their environment.

Other researchers later extended and expanded Murray's work on need theories. Most notably, David McClelland developed a theory of motivation that focused particularly on the need for achievement.<sup>19</sup> According to McClelland, people can be characterized as either high or low on the need for achievement (nAch). Those who are high in nAch prefer situations in which they have the opportunity to take personal responsibility. These individuals also prefer to receive personal credit for the consequences of their actions and clear and unambiguous feedback about personal performance. According to McClelland, the key to workplace motivation is to find high-nAch individuals (or raise the levels of low-nAch individuals through training) and expose them to situations conducive to fulfilling the need for achievement.

For example, Microsoft is well known for selecting individuals who have high intelligence and a high need for achievement. To make this strategy truly effective, however, the company must tie the person's perceptions of self-worth and achievement to task accomplishment—often expressed in terms of creating marketable products. As one insider notes, "Creativity is

**Table 5.1** Some of Murray's Manifest Needs

Achievement	To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something important, to do a difficult job well
Deference	To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to accept leadership of others, to conform to custom
Order	To keep things neat and orderly, to make advance plans, to organize details of work, to have things arranged so they run smoothly without change
Autonomy	To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to do things without regard for what others may think
Affiliation	To be loyal to friends, to participate in friendly groups, to form strong attachments, to share things with friends, to write letters to friends, to make as many friends as possible
Dominance	To argue for one's point of view, to be a leader in groups to which one belongs, to persuade and influence others, to supervise and direct the actions of others
Nurturance	To help friends when they are in trouble, to treat others with kindness and sympathy, to forgive others and do favors for them, to show affection and have others confide in one
Change	To do new and different things, to travel, to meet new people, to have novelty and change in daily routine, to try new and different jobs, to participate in new fads and fashions
Endurance	To keep at a job until it is finished, to work hard at a task, to work at a single job before taking on others, to stick to a problem even though no apparent progress is being made
Aggression	To attack contrary points of view, to tell others off, to get revenge for insults, to blame others when things go wrong, to criticize others publicly, to read accounts of violence

Source: Based on H. A. Murray, *Explorations in Personality* (New York: Oxford University Press, 1938), pp. 152–205.

highly regarded at Microsoft for a short period of time, but that is not how people really rank each other. The primary thing is to ship a product. Until you have done that—you're suspect. It involves taking this passion of yours and running it through a humiliating, exhausting process.”<sup>20</sup> When people who rate high in their need for achievement are personally challenged in this fashion, they are no longer being driven by the money, but instead are driven by more intrinsic rewards and punishments. The ability to shift away from purely financial inducements is particularly important in an economy where money is tight. Indeed, employers are increasingly trying to lower their costs for labor, which in turn restricts the degree to which they can reward top performers with pay raises. Organizations risk losing their top performers if they cannot come up with alternatives to pay as a means of motivating their workforce.<sup>21</sup>

### Instrumentality: Learning Theories

The understanding of valence contributed by need theories provides only one piece of the motivational puzzle—what people want. To understand behavior, we need to know not just

what people want but what they believe will lead to the attainment of what they want. As noted earlier, these beliefs are referred to as *instrumentalities*. Learning theories help clarify how relationships between behaviors and rewards come to be perceived. They also provide information that allows us to estimate the character, permanence, and strength of these relationships.

The notion that people generally behave so as to maximize pleasure and minimize pain was first formulated by the ancient Greek philosophers and captured in the concept of **hedonism**. Virtually all modern theories of motivation incorporate this concept. It is especially conspicuous in learning theories, all of which attempt to explain behavior in terms of the associations that people use to link some behavior and some outcome. Two types of learning theories are discussed here: operant learning (reinforcement theory) and social learning.

### Reinforcement Theory

Reinforcement theory proposes that a person engages in a specific behavior because that behavior has been reinforced by a specific outcome. A simple example of positive reinforcement can be seen in a recent study that examined ways to reduce absenteeism. In this study, several locations of a garment factory that had been experiencing attendance problems served as the backdrop for an intervention that was designed around public recognition. The idea was to give positive attention to workers who were absent less than three days each quarter. Employees who managed this were given (a) personal attention in the form of a letter from the CEO thanking them for their diligence, (b) a public celebration party where they were wined and dined along with other winners, and (c) small symbolic mementos (a gold necklace for women and a gold penknife for men) to highlight their accomplishments. Within a year, plants that had adopted the recognition program experienced a 50 percent reduction in absenteeism compared to control plants.<sup>22</sup>

A more complex example of how to link organizational strategy, technological advances, and positive reinforcement can be seen with MBNA, a company that produces Visa and MasterCard credit cards. MBNA's strategy is to market credit cards to "affinity groups," that is, groups with strong loyalties. Thus, they produce cards that incorporate anything from the Dallas Cowboys logo to personal pet photos (for Ralston Purina). Members of these affinity groups are lucrative customers, with incomes 20 percent above the national average and balances close to \$2,000 above the industry average. Not surprisingly, however, these high-profile customers also demand high levels of service and, above all, they hate to wait.

To make sure that service is provided, MBNA relies heavily on an integrated system of technology and incentives. For example, one goal they have is to make sure that 98.5 percent of phone calls get picked up on fewer than two rings. They measure this electronically, and at any moment on a given day it is possible to get a reading that shows that employees are achieving "two-ring pickup" 98.4 percent of the time, and to show that this is 1.2 percent higher than average, a 1 percent fall-off from the previous day, and 0.1 percent shy of the goal. Results for this and 14 other goals (such as processing a request to increase a credit line in 15 minutes or less) are then posted daily on 60 scoreboards at MBNA facilities around the country.

Incentives are then wrapped around these electronic measures. For example, every day the 98.5 percent standard is met, money is thrown into an employee pool. Money from this pool is then handed out at regular intervals—as much as \$1,000 per employee—depending on the percentage of times the goal is met. Similar incentives are tied to the other 14 goals. The effect on employees is evident in the words of manager Janine Marrone, who notes, "If you're an

MBNA employee and go to a restaurant and hear a phone ring more than twice, it drives you nuts—you have to stop yourself from going behind the counter and answering it.”<sup>23</sup> Indeed, the term *operant learning* derives from the fact that the person must perform some *operation* to receive the reinforcing outcome.

Operant learning is especially good for reinforcing simple or well-learned responses. In some cases, however, managers may want to encourage a complex behavior that might not occur on its own. In this instance, the process of shaping can be helpful. **Shaping** means rewarding successive approximations to a desired behavior, so that “getting close counts.” For example, someone who has never played golf is highly unlikely to pick up a club and execute a perfect drive with his or her first swing. Left alone to try repeatedly with no instruction, a novice golfer probably will never exhibit the correct behavior.

In shaping, rather than waiting for the correct behavior to occur on its own, close approximations win rewards. Over time, rewards are held back until the person more closely approaches the right behavior. Thus a golf instructor might at first praise a novice golfer for holding the club with the right grip. To obtain a second reward, the novice may be required not only to display the correct grip but also to stand at the appropriate distance from the ball. To obtain additional rewards, the novice may have to do both of these things and execute the backswing correctly, and so on. In this way, simple initial behaviors become shaped into a complex desired behavior. Over time, increasingly difficult behaviors have to be mastered, and this kind of “deliberate practice” can eventually lead to high levels of expertise. Indeed, studies of experts in many different fields suggest that this kind of hard work and dedication directed at learning new details about a specific task is what underlies the success of many great performers in sports, business, science, and medicine. Across many different disciplines, the research seems to suggest that it takes at least ten years to truly develop expertise with any complex task.<sup>24</sup>

**Extinction** is a second form of reinforcement. In extinction, a weakened response occurs because the desired outcome is no longer paired with some positive reinforcer. Indeed, one problem with reinforcement systems is that they often focus attention so exclusively on the reinforced behavior that other non-reinforced behaviors languish. For example, in attempting to process a credit application more quickly, an employee may sacrifice quality (and perhaps issue credit to a poor risk) if no reinforcement exists for making good decisions as well as fast ones.

Negative reinforcement and punishment are two other types of reinforcement used to influence behavior. In **negative reinforcement**, the likelihood that a person will engage in a particular behavior increases because the behavior is followed by the removal of something the person dislikes. In **punishment**, the likelihood of a given behavior decreases because it is followed by something that the person dislikes. Figure 5.3 illustrates the distinctions drawn

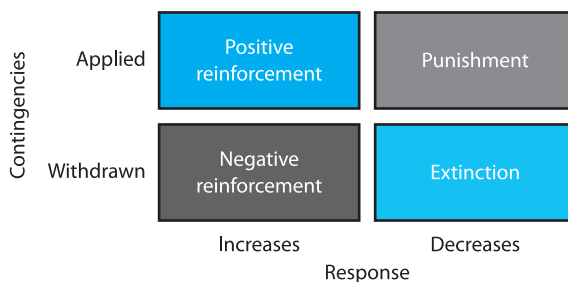


Figure 5.3 Effects of Methods of Reinforcement on Behavioral Response

among positive reinforcement, extinction, negative reinforcement, and punishment. As shown in the figure, reinforcement theory can be used to promote or inhibit behaviors, as can employing both positive and negative rewards.

Managers in organizations sometimes contend that they cannot use reinforcement theory because they do not have enough resources to give positive reinforcements. For example, they cannot always raise salaries or award bonuses as they might like. Behavioral management programs that rely on positive reinforcement often need to go beyond money to truly be effective. Moreover, as Figure 5.3 makes clear, positive reinforcement is merely one of a number of possible ways to increase the frequency of a desired behavior. For instance, managers can employ negative reinforcement to increase a response. They can find something about the job that people do not like and, when employees engage in desired behaviors, remove it. A sales manager who wants to increase sales and who knows that salespeople hate to complete paperwork associated with their work, for example, might offer to shift the responsibility for completing paperwork to others if these employees increase their productivity. The sales force's enthusiasm for selling might increase noticeably as a result.

Although it is sometimes difficult to come up with ideas for positive rewards, most organizations can easily envision a wide variety of ways to punish people. Indeed, managers often instinctively react in this manner when confronted with a behavior that they wish to eliminate. This is somewhat problematic because research shows that, when approached the right way, people can learn a great deal from their errors, and in some training contexts the *best* way for people to learn is to force them to make certain types of errors.<sup>25</sup> If the errors occur in a supportive training context that minimizes the negative emotional reactions that come with failure, this promotes both learning and risk taking.<sup>26</sup>

As Figure 5.3 shows, however, by itself punishment can only suppress undesired behaviors but not promote desired behaviors. In many instances, some other undesirable behavior may simply spring up in place of the old, bad behavior. For example, taking away access to the Internet may simply transform a cyberslacker into a slacker. Moreover, punishment tends to have short-lived effects, and it can produce side effects such as negative emotional reactions among those who are punished.<sup>27</sup> Finally, one important side effect of punishment is that it often leads to cover-ups of information that needs to get out in order to improve systems. For example, the Federal Aviation Authority (FAA) and the airline pilots unions had an agreement on voluntary information sharing that protected any pilot who made an error from prosecution if he or she reported the error within 24 hours of the incident. The purpose of this protection was to perfect the entire airline system and make sure no other pilot made the same mistake. However, owing to strained labor relations between the pilots unions and the airlines, the airlines were increasingly using such reports as a pretext to fire pilots, which led the union to threaten to suspend the program in 2008. Many observers felt the negative effects of punishing pilots for errors (cover-ups) were much worse than the gain that might come from firing one or two pilots who made a mistake.<sup>28</sup>

Despite these dangers, many organizations continue to mete out punishment, because some behaviors are so damaging to the firm that stopping them is crucial. Moreover, failure to take action may imply acceptance of the offending behavior, and the organization may be held liable for the employee's actions. For example, if a cyberslacking employee downloads and transmits pornography over the company's Internet connection, this practice could be viewed as creating a hostile work environment—opening up the organization to sexual harassment charges. Thus, rather than eliminating punishment altogether, organizations need to strive to punish employees more effectively. A company can take several steps to move in this direction.

First, effective discipline programs are *progressive*—that is, they move in incremental steps.

A program might start with a simple oral warning, followed by a written formal notice and then some actual disciplinary action that falls short of termination (such as suspension). Second, punishment should be *immediate* rather than delayed. This characteristic maximizes the perceived contingency between the offending behavior and the punishment, and it minimizes the perception that the offending behavior represents a pretext to punish the person for something else. Third, punishment should be *consistent*, so that the punishment is the same no matter who commits the offense. Fourth, punishment should be *impersonal*—that is, directed at the behavior rather than at the individual as a person. Finally, punishment should be *documented* to construct a “paper trail” of physical evidence that supports the contention that the punishment meted out was progressive, immediate, consistent, and impersonal.

In addition to implementing these five steps, in organizations that employ self-managing teams, it is important to have team members join in this decision. As individuals, group members are often more lenient than hierarchical supervisors. When allowed to discuss the offense as a group and reach consensus, however, the group as a whole tends to show much less leniency.<sup>29</sup> Indeed, group-based decisions regarding discipline often resemble the decision that would be made by supervisors working alone. Recognition of this fact is important, because supervisors armed with the support of the work group they represent enjoy a much stronger position when it comes to doling out punishment.

Although the steps described previously may seem like simple and rational procedures that do not need to be spelled out, this perception is not always accurate. The types of offenses that call for punishment often generate strong emotional reactions from managers that short-circuit rationality. Indeed, these disciplinary procedures may seem excruciatingly slow to the offended manager, and they may frustrate his or her need for quick and satisfying retribution. Managers need to be assured that the process is slow but sure. In the end, if the problem employee must be fired, the procedures ensure that the company can prove the action was justified. Otherwise, the company might be sued for “wrongful discharge” and be unable to terminate the offending party.

### Social Learning

Social learning theory, as proposed by Albert Bandura, encompasses a theory of observational learning that holds that most people learn behaviors by observing others and then *modeling* the behaviors perceived as being effective. Such observational learning is in marked contrast to the process of learning through direct reinforcement, and it better explains how people learn complex behavioral sequences.

For example, suppose a worker observes a colleague who, after giving bad news to their manager, is punished. Strict reinforcement theory would suggest that, when confronted with the same task, the observing worker will be neither more nor less prone to be the bearer of bad tidings because that person has not personally been reinforced. Social learning theory suggests otherwise. Although the worker may not have directly experienced the fate of a colleague, he or she will nonetheless learn by observation that this manager “shoots the messenger.” The employee will probably conclude that the best response in such situations is to keep quiet. Even though the manager might not agree that problems should be covered up, his or her behavior may send precisely this message. Indeed, “fearing the boss more than the competition” has been cited as one of the top ten reasons companies fail.<sup>30</sup>

Besides focusing on learning by observation, social learning theory proposes that people can reinforce or punish their own behaviors; that is, they can engage in *self-reinforcement*. According to Bandura, a self-reinforcing event occurs when (1) tangible rewards are readily

available for the taking, (2) people deny themselves free access to those rewards, and (3) they allow themselves to acquire the rewards only after achieving difficult self-set goals.<sup>31</sup> For example, many successful writers, once alone and seated at their workstations, refuse to take a break until they have written a certain number of pages. Obviously, the writers can leave any time they wish. They deny themselves the reward of a rest, however, until they have accomplished their self-set goals.<sup>32</sup> Research indicates that this type of self-reinforcement can be used to help people stop smoking, overcome drug addiction, cure obesity, improve study habits, enhance scholastic achievement, and reduce absenteeism.<sup>33</sup>

Valence and instrumentality, the first two parts of our model of motivation, combine to influence the desire to perform (Figure 5.4). People will be motivated to perform at a high level as long as they perceive that receiving high-valence outcomes is contingent upon giving a strong personal performance. Our understanding of the process depicted in Figure 5.4 partly depends on need theories, which explain which outcomes individuals will perceive as having positive valences. In addition, reinforcement theories explain how people learn about contingencies, so they provide insight into the process that makes people want to perform.

## Expectancy: Self-Efficacy Theory

### Self-Efficacy and Behavior

Although actually part of Bandura's social learning theory, self-efficacy constitutes an important topic in its own right. **Self-efficacy** refers to the judgments that people make about their ability to execute courses of action required to deal with prospective situations.<sup>34</sup> Individuals high in self-efficacy believe that they can master (or have mastered) some specific task. Self-efficacy determines how much effort people will expend and how long they will persist in the face of obstacles or stressful experiences.<sup>35</sup> When beset with difficulties, people who entertain serious doubts about their capabilities tend to slacken their efforts or give up altogether. In contrast, those who have a strong sense of efficacy tend to exert greater effort to master the challenges, and the positive effects for this characteristic seem to manifest themselves even if one controls for cognitive ability and various other personality traits.<sup>36</sup> Indeed, if high levels of self-efficacy have a downside, it is the fact that these people will often confidently persist even in the face of consistent feedback indicating that they should change

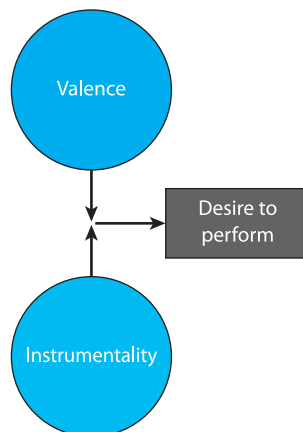


Figure 5.4 Step I: The Desire to Perform as a Function of Valence and Instrumentality



their tactics or lower their self-image. This overconfidence effect also leads people who are high in self-efficacy to underestimate the amount of resources needed to accomplish some difficult goal.<sup>37</sup> However, for the most part, the positive aspects of high self-efficacy seem to outweigh these negative side effects.<sup>38</sup>

### Sources of Self-Efficacy

Given that feelings of self-efficacy can greatly influence behavior, it is important to identify the sources of those feelings. Bandura identified four sources of self-efficacy beliefs. First, self-efficacy can reflect a person's *past accomplishments*. Past instances of successful behavior increase personal feelings of self-efficacy, especially when these successes seem attributable to unchanging factors such as personal ability or a manageable level of task difficulty.<sup>39</sup>

The link between self-efficacy theory and social learning theory is made clear in Bandura's second source of self-efficacy beliefs: *observation of others*. Merely watching someone else perform successfully on a task may increase an individual's sense of self-efficacy with respect to the same task. Note, however, that characteristics of the observer and model can influence the effects of observation on feelings of self-efficacy. For instance, the observer must judge the model to be both credible and similar to the observer (in terms of personal characteristics such as ability and experience) if the observation is to influence the individual's efficacy perceptions.

A third source of self-efficacy is *verbal persuasion*. Convincing people that they can master a behavior will, under some circumstances, increase their perceptions of self-efficacy. The characteristics of the source and the target of the communication, however, can affect how the verbal persuasion influences self-efficacy perceptions. Again, people who are perceived as credible and trustworthy are most able to influence others' self-efficacy perceptions in this manner.

*Logical verification* is another source of self-efficacy perceptions. With logical verification, people can generate perceptions of self-efficacy at a new task by perceiving a systematic relationship between the new task and an already-mastered task. For example, if an experienced employee is apprehensive about his or her ability to learn some new software program, the manager should emphasize how many other changes in work procedures this person has successfully managed in the past, and then argue that there is no logical reason why learning this new program will be any different.

Self-efficacy theory is particularly useful for explaining how expectancies are formed and suggesting how they might be changed. Of course, as Figure 5.5 suggests, a person's beliefs

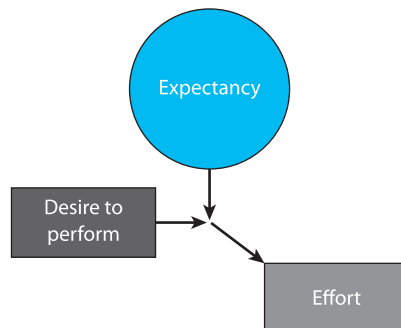


Figure 5.5 Step 2: Level of Effort as a Function of Desire and Expectancy

will not necessarily translate into motivation unless the person truly desires to excel. Similarly, simply wanting to excel will not bring about high levels of effort unless the person has some belief that such performance is possible.

## Accuracy of Role Perceptions: Goal-Setting Theory

Role perceptions are people's beliefs about what they are supposed to accomplish on the job and how they should achieve those goals. When these beliefs are accurate, people facing a task know what needs to be done, how long it should take, and who will have the responsibility to carry out the task at hand. Such role accuracy guarantees that the energy devoted to task accomplishment will be directed toward the right activities and outcomes. At the same time, it decreases the amount of energy wasted on unimportant goals and activities. Goal-setting theory can help us understand how to enhance the accuracy of role perceptions.

### Important Goal Attributes

Employees are often told, "Do your best." Although this axiom is intended to guide job performance in everyday situations, research has consistently demonstrated that such vague instructions can actually undermine personal performance. In contrast, more than 100 studies support the assertion that performance is enhanced by goals that are both *specific and difficult*.<sup>40</sup> Indeed, setting specific goals has improved performance in a wide variety of jobs (Table 5.2). Specific and difficult goals appear to promote greater effort and to enhance persistence, especially when combined with timely feedback and incentives.<sup>41</sup> Specific and difficult goals are especially effective when incorporated into a continuous improvement cycle in which future goals consist of reasonable increments on past goals.<sup>42</sup> They also encourage people to develop effective task strategies and sharpen their mental focus on the task.<sup>43</sup> Their primary virtue, however, is that they direct attention to specific desired results, clarifying priorities and perceptions of both what is important and what level of performance is needed.<sup>44</sup>

As we saw in the Whirlpool example at the beginning of this chapter, however, difficult goals can also lead to unethical behaviors.<sup>45</sup> For example, Bernard Ebbers, CEO of WorldCom, stated, "Our goal is not to capture market share or be global, but instead our goal is to be the Number 1 stock on Wall Street." Of course, achieving the latter goal was going to be very difficult if one ignored the first two goals, and Ebbers tried to achieve this by acquiring more and more unrelated businesses.<sup>46</sup> This made it look as though the company was experiencing ever greater revenues in the short term, but, without the knowledge of how to achieve market share or expand their markets, this could not be sustained over the long

**Table 5.2** Jobholders Who Have Improved Performance in Goal-Setting Programs

Telephone servicepersons	Loggers
Baggage handlers	Marine recruits
Typists	Union bargaining representatives
Salespersons	Bank managers
Truck loaders	Assembly line workers
College students	Animal trappers
Sewing machine operators	Maintenance technicians
Engineering researchers	Dockworkers
Scientists	Die casters

term—resulting in one of the largest bankruptcies ever recorded in U.S. history. Thus, although the motivational power of goals is often impressive, one has to be very careful of exactly how goals are expressed, how difficult they will be to achieve, and what exact behaviors they will motivate.

### Goal Commitment and Participation

The extent to which a person feels committed to a goal can also affect performance. As depicted in Figure 5.6, specific and difficult goals tend to lead to increased performance only when there is high goal commitment.<sup>47</sup> The requirement that people be committed to goals means that goals must be set carefully, because when they are too difficult they are typically met with less commitment. People may view a goal that is set too high as impossible; thus, they reject it altogether.

Fortunately, research has examined several ways to increase commitment to difficult goals. One important factor is the degree to which the goals are public rather than private. In one study, students for whom difficult goals for GPA were made public (posted on bulletin boards) showed higher levels of commitment to those goals relative to students with private goals. This study also found a significant positive relationship between need for achievement and goal commitment. Moreover, the positive relationship between need for achievement and goal commitment was especially strong when the goals were set by the students themselves, as opposed to being assigned by an outside party.<sup>48</sup> If the employee is not allowed to set his or her own goals, the next best thing for instilling commitment is to at least let the employee participate in the goal-setting process. Participation promotes commitment, especially in certain cultures (low power distance). We will have more to say about cultural differences in Chapter 15, but for now we will simply note that, in some cultures (high power distance), people do not expect to participate, and hence will often show more commitment to assigned goals than those they set for themselves.<sup>49</sup>

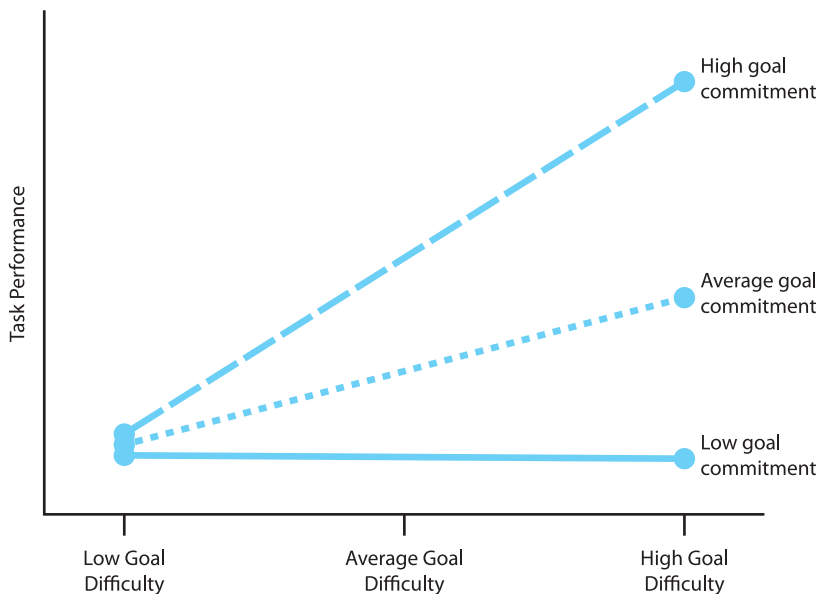


Figure 5.6 Conceptual Interactive Relationship between Goal Difficulty and Goal Commitment

## Goals and Strategies

As shown in Table 5.2, goal setting can increase performance on a variety of jobs. Nevertheless, most early research on goal setting consisted of studies that focused attention on relatively simple tasks. More recent research has extended goal-setting theory into more complex task domains. In these situations, however, the links between goals, effort, and performance are less clear. A review of these studies indicates that, while goals have positive effects on all tasks, the magnitude of the effect is stronger for simple tasks than for complex tasks.<sup>50</sup> Figure 5.7 illustrates how the effect of goal difficulty on performance decreases as task complexity increases.

In fact, focusing on narrow goals related to performance may discourage people from experimenting with new strategies and developing new skills, which as we noted earlier is the key to developing expertise on complex tasks. A performance drop-off often occurs when people switch from well-learned strategies to new and different ones. For example, if a person has gained a great deal of proficiency with one word-processing program, that individual may express reluctance to upgrade to a new and improved program; while learning the new program, the employee fears that he or she will not work as quickly as was possible with the old program. Indeed, even if the worker is convinced that in the long run he or she will be able to work more rapidly with the new program, the employee may still be unwilling to pay the short-term performance costs of learning the new program.

The term **goal orientation** has been coined to distinguish between people who approach a task with the goal of learning how to improve and people whose goals focus strictly on performing at a certain level.<sup>51</sup> Goal orientation is sometimes construed as an individual

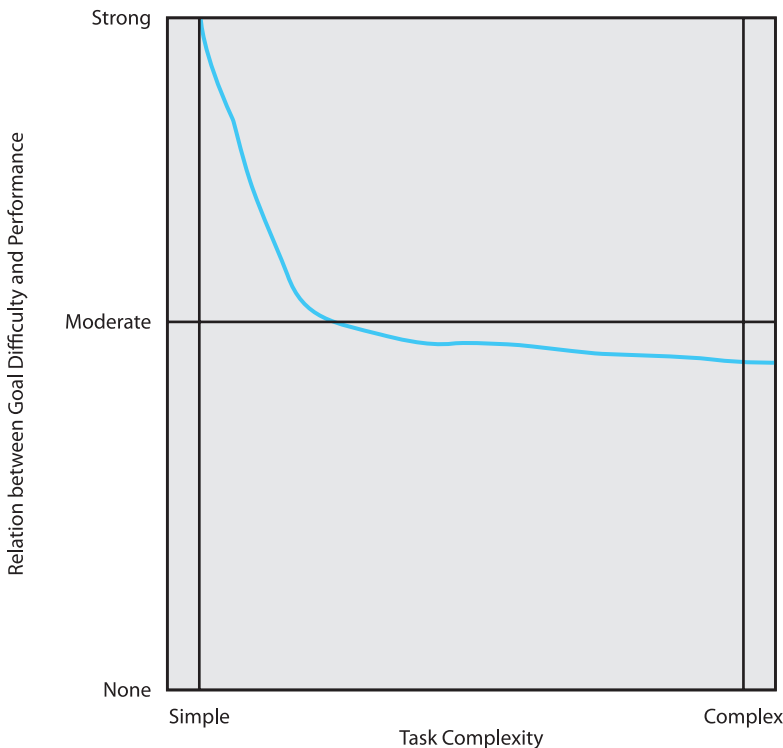


Figure 5.7 Goal Difficulty, Task Complexity, and Performance

difference variable, but it can also be manipulated by attention-focusing instructions.<sup>52</sup> Although people with a strict performance orientation often perform best on simple, stable, short-term tasks, people with a learning orientation often perform better on complex, dynamic, long-term tasks.<sup>53</sup> Thus, the objectives of any managerially inspired goal-setting program must account for the need to perform at a high level as well as the need to create enough slack in the system to allow people to experiment with new and potentially improved task strategies. This seems to be particularly the case for workers who are high in intelligence and hence derive more from potential learning experiences.<sup>54</sup>

Although research on performance strategies has yielded findings that sometimes conflict with the results of other goal-setting studies, it is nevertheless helpful in delineating the specific, role-clarifying effects of goals. In simple tasks, where the *means* to perform a task are clear, specific and difficult goals lead to higher performance because they clarify the *ends* toward which task effort should be directed. In complex tasks, however, the means are not clear. Individuals performing such tasks do not know how to proceed in the best way, so merely clarifying the ends sought is unlikely to enhance performance.

## Ability and Experience Revisited

### Nonmotivational Determinants of Performance

Although this chapter has focused primarily on motivation, task performance is also contingent on the worker's abilities. Chapter 3 discussed abilities at great length, so here we will narrow the focus to how individual differences interact with goal setting and task strategies.

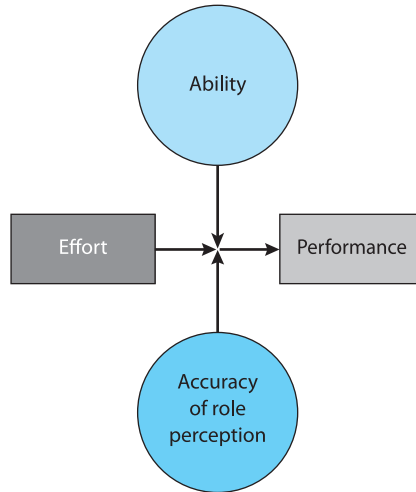
Two things are worth noting with respect to nonmotivational determinants of performance. First, people lacking the requisite abilities cannot perform a complex task even under the most favorable goal-related circumstances.

Second, some subtle relationships exist among goal setting, attention, and cognitive capacity that affect task performance. As you will recall, one way that goal setting affects performance is by directing attention to the kinds of desired results. Kanfer and Ackerman have developed a model that recognizes that different people bring varying amounts of cognitive ability to bear on a task and that this restriction limits how much they can attend to at any one time.<sup>55</sup> Because it diverts attention from the task to the goal, goal setting may be particularly damaging to people who have low ability or who are still learning the task. Such people need to devote all their attention to the task, and goal setting is unlikely to enhance their performance.

Thus, although motivation is critical to performance, we should not forget the lessons learned in Chapter 3 about the importance of ability. For all but the simplest tasks, there is no substitute for ability. In this third step of building our overall motivation model, we can see how motivation and other factors combine to determine performance (Figure 5.8). Specifically, performance will be high when a person puts forth significant effort, directs this effort toward the right outcomes, and has the ability to execute the behaviors necessary for bringing about those outcomes.

### Experience and Cyclical Effects

The fourth and final step needed to complete our motivation and performance model deals with the links that make the model dynamic over time. Figure 5.1 includes three arrows that head back left. First, a feedback loop goes from performance to valence. Recall that valence, as



**Figure 5.8** Step 3: Performance as a Function of Effort, Accuracy of Role Perception, and Ability

a construct, deals with *anticipated* satisfaction, not realized satisfaction. The feedback loop allows for the possibility that an outcome received for performing some task might not bring much real satisfaction to the person when it is actually received. Valence for such an outcome would then decrease relative to its value at an earlier time.

Another link in Figure 5.1 goes from performance to instrumentalities. This loop implies that the outcomes received for performing at some level at one time will affect the person's perceived instrumentalities at later times. If no reward follows high performance, extinction of the performance response could take place, lowering the perceived instrumentality of high performance.

Finally, an arrow goes from performance to expectancy in Figure 5.1. This loop affirms that expectancies and self-efficacy are based at least partially on prior performance. All else being equal, successful performance strengthens self-efficacy and leads to high expectancies. Failing at a task, however, generally leads to lower levels of self-efficacy. Clearly, feedback is central to the motivational process for a number of different reasons.

These three dynamic links in our motivation model suggest that motivation can change over time. For example, Figure 5.1 suggests that even highly motivated people might lose motivation for any of three reasons. First, individuals who start out with high expectancies might discover during job performance that they cannot perform nearly as well as they anticipated. Decreased self-efficacy would lead to reduced expectancy perceptions, and lower motivation would probably result. Second, individuals might discover that performing well on a job does not lead to the desirable outcomes they expected. Motivation could then diminish as projected instrumentalities fail to materialize. Third, experience with the rewards received from performing a job might lead someone to discover faults with the initial valences. That is, the rewards expected to yield satisfaction might not do so.

## High-Performance Work Systems

As we noted at the outset of this chapter, in theoretical terms, one of the least controversial statements one can make about paying workers is that it is important to tie pay to job performance. In reality, the implementation of programs to bring about such a relationship often

proves quite difficult. To get a feeling for some of the dilemmas involved, consider the following issues that arise when pay-for-performance programs are contemplated.

First, should pay increases be based on outcomes that occur at the individual level (that is, performance of individual workers), the group level (performance of different teams), or the organizational level (performance of the entire business)? If the individual level is used as the standard, the organization may create competition among co-workers and destroy team morale. When pay-for-performance occurs at the group and organizational levels, individuals may find it difficult to see how their own performance relates to group or organizational performance and outcomes.<sup>56</sup> According to expectancy theory terms, these kinds of conditions lower instrumentality.

Second, if the firm decides to pay at the individual level, should it establish the rules for payment in advance (for example, telling workers that they will receive \$5 per widget produced)? This plan may sound like a good idea, but prevents the company from accurately forecasting its labor costs; that is, the firm cannot anticipate exactly how many widgets will be produced. Moreover, because the price of the product sold or service rendered cannot be known in advance, the organization may not be able to anticipate its revenues. On the other hand, if the firm waits until the end of the year to see how much money is available for merit pay, people will not know in advance exactly how their performance relates to their pay. Moreover, if the organization engages in pay secrecy to protect people's privacy, how can anyone actually know whether the merit system is fair?<sup>57</sup>

Third, how large should incentives be, and how much variability should exist within and between job categories? Research suggests that incentives that are less than 5 percent of the regular salary have little motivational value; thus the company may want to aim for larger incentives.<sup>58</sup> If the overall amount of compensation is fixed, however, larger incentives imply that fewer rewards will be handed out, which can lead to wide variability of pay within the same job category. Such systems tend to engender resentment among workers and hinder collaboration and teamwork.<sup>59</sup>

Fourth, if the company decides to keep incentives at an organizational level, should it base the rewards on cost savings and distribute them yearly, or base them on profits and distribute them on a deferred basis? The calculations and accounting procedures required by cost-savings plans are enormous and complex, but rewards are distributed quickly. Profit-sharing plans are much easier to handle from an accounting perspective. Because the rewards are distributed on a deferred basis, however, they are less motivating than cost-savings plans.

These questions highlight the complexity inherent in putting into practice the seemingly simple theoretical concept of "paying for performance." Covering all the complexities of these issues is well beyond the scope of this chapter. We will examine, however, the distinguishing features of four kinds of pay-for-performance programs: merit-based plans, incentive plans, cost-savings plans, and profit-sharing plans.

### **Merit-Pay and Incentive Systems**

Individual pay-for-performance plans base financial compensation, at least in part, on the accomplishments of individual workers. Two types of individual programs exist: those based on merit and those based on incentives. Merit-based pay plans are by far the easier to administer and control. These programs assess performance at the end of the fiscal year via subjective ratings of employees made by supervisors. Also at the end of the year, a fixed sum of money is allocated to wage increases. This sum is distributed to individuals in amounts proportional to their performance ratings.

In designing merit-based programs, four major considerations arise. First, what will the

average performer receive? Many firms try to ensure that the pay of average performers at least keeps up with inflation. As a result, the midpoint of the rating scale is often tied to the consumer price index (CPI). Typically, this implies an average pay raise in the 3–5 percent range, although this will vary depending upon the state of the economy and firm performance.<sup>60</sup>

Second, what will a poor performer receive? Traditionally, companies rarely *lower* an employee's wages; however, raises that fail to cover the CPI are actually wage decreases in terms of buying power. Is it in the firm's best interests to allow the wage increases of poor performers to slip below the inflation level? If so, how much damage does the organization wish to inflict on low performers? How easily replaced are these people if they respond by quitting?

Third, how much will high performers receive? Will high performers at the top of a pay grade receive the same raise as those at the bottom of a higher wage grade? Paying for performance could cause top performers in jobs lower in the hierarchy to surpass (through yearly raises) low performers in upper-level jobs over time. Indeed, to prevent this type of compression, many companies have adopted the practice of *broad banding*. Broad banding simply means reducing the number of hierarchical distinctions between jobs. For example, General Electric has tried to move away from length of service and rank as pay determinants. To do so, it cut the levels of salary grades from 29 to 6. As a result, people now have more opportunities to get a raise without a promotion.<sup>61</sup>

Fourth, how will the pay variability between the highest and lowest performer affect collaboration and teamwork? Note that merit systems are somewhat competitive in the sense that, if the average raise is 5 percent, the only way one person can get 10 percent is if other people get less than 5 percent. If there is a great deal of interdependence inherent in the work, one member of the group might try to sabotage the efforts of another group member to restrict their ability to get higher raises than everyone else. Even short of direct sabotage, a worker who learns some valuable technique that gives him or her a competitive advantage over other team members may be reluctant to share this information with them, even though it is in the larger interest of the team and organization to share this valuable information.

Although supervisors have traditionally given the performance ratings that determine merit pay, this practice is now changing. In the services sector of the economy, high-performance work systems have eliminated the "middle man" (the supervisor). In such companies, merit-pay raises are tied directly to customer service ratings obtained from surveys. For example, at the MGM Grand Hotel in Las Vegas, customer ratings are weighted heavily when making annual merit-pay decisions for workers who engage in a great deal of direct service.<sup>62</sup>

Some of the problems with merit systems can be reduced if one adopts incentive systems. Incentive systems differ from merit-based systems in three ways. First, incentive programs stipulate the rules by which payment will be made in advance, so that the worker can calculate exactly how much money will be earned if a certain level of performance is achieved. Second, rewards in an incentive program are based on objective measures of performance. Third, incentive systems are usually non-competitive within the unit, such that all members could receive the incentive if they meet their individual objectives, and one team member's gain does not necessarily imply another team member's loss.

Simple *piecework plans* establish a standard of productivity per time interval, and any productivity beyond that standard is rewarded with a set amount per unit. This type of plan is easy for the worker to understand, and it creates a clear performance to outcome expectancy. On the other hand, the standard must often be adjusted. If it is initially set too low, labor costs can get out of hand. If it is set too high, workers will reject it when they discover that the standard cannot be reached, even with harder work. If the standard is flexible, gradual



increases in the standard may be viewed as a manipulative management trick, whereas decreases will cause some workers to try to manipulate the system by lowering output. Furthermore, without built-in safeguards, these programs may lead workers to achieve quantity at the price of quality or ethical violations.<sup>63</sup>

Although incentive systems do not necessarily have to be competitive, in order to control costs, organizations sometimes limit the number of people who can win an incentive. For example, the organization may not be able to provide a Hawaiian vacation to every salesperson, but they might make one available to the highest performer. The minute the incentive becomes competitive like this, it becomes like a merit system in terms of threatening teamwork. For example, Lantech, a small manufacturer of packaging material in Louisville, Kentucky, implemented a bonus-type incentive system built around cost containment, where the manager who cut costs the most won a bonus. The competition within the organization to get the bonus grew heated, and each person tried to assign costs to others. At one point, the competition became so petty that a manager tried to pass off the cost of his toilet paper to a different division. Pat Lancaster, CEO at Lantech, noted, "I was spending 95 percent of my time on conflict resolution instead of on how to serve our customers." To eliminate these types of problems, Lantech, like many other organizations, eventually scuttled its individual-based plan, replacing it with an organization-level plan.<sup>64</sup>

### **Profit-Sharing and Cost-Savings Plans**

Whereas merit-based plans and incentive plans tie pay to performance at the individual level, profit-sharing and cost-savings plans tie pay to performance at a broader level. Profit-sharing plans distribute organizational profits to employees. According to recent estimates, 20 percent of U.S. firms have such plans in place, and the popularity of these plans is growing. Cash distribution plans provide full payment soon after profits have been determined (annually or quarterly). To reap tax advantages, most plans—indeed, as many as 80 percent—provide deferred payments. In these plans, current profits accumulate in employee accounts, and a cash payment is made only when a worker becomes disabled, leaves the organization, retires, or dies. Of course, not all the company's profits are redistributed. Research suggests that the share of profits distributed may range from a low of 14 percent to a high of 33 percent.<sup>65</sup>

As we saw earlier with another form of organizational-level plan, stock options, one problem with profit-sharing plans is that employees often find it difficult to see the connection between their activities and their company's profits. This issue is especially apparent when something uncontrollable, such as an overall downturn in the economy, totally eliminates any hope of the organization making a profit in the short term. Similarly, with respect to profit-sharing plans, when multiple businesses are involved, people may struggle to see the link between their efforts and corporate profits. For these reasons, the day-to-day motivational value of these kinds of programs may be questionable. Would a worker who might otherwise quit work an hour early really stop for fear of how it might affect the company's profits?<sup>66</sup>

To eliminate this problem, some organizations have adopted cost-savings plans that pay workers bonuses out of the money the company has saved through increased efficiency of its operations. Workers often have more control over the costs of doing business than the company's stock price or profits, so it is easier for them to see the connection between their own work and cost reductions.<sup>67</sup>

We have sampled only a few of the many pay-for-performance programs currently in use. As you can see, some of these programs are highly complex. You should, however, have some feel

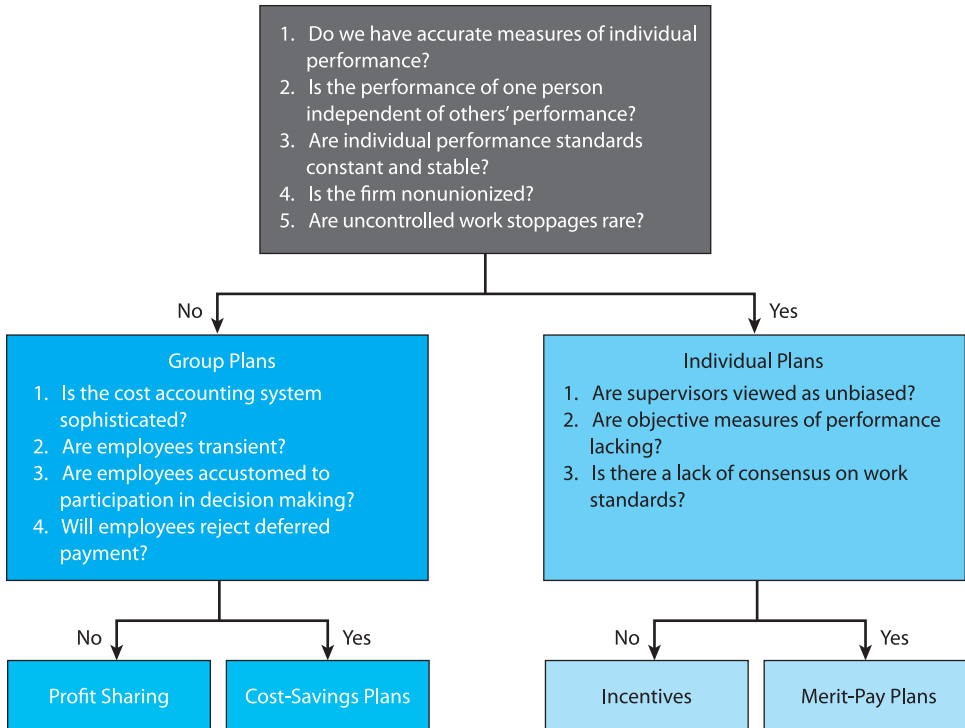


Figure 5.9 Deciding among Alternative Pay-for-Performance Programs

for the kinds of issues raised by such programs. Figure 5.9 provides guidance on choosing a suitable plan. It explains under what circumstances an individual or a group plan is appropriate and in what situations specific individual or group plans are most effective.

## Summary

Our model of motivation and performance is based on *expectancy theory* and incorporates concepts from four other theories of motivation: *need theory*, *learning theory*, *self-efficacy theory*, and *goal-setting theory*. The model focuses on explaining three outcomes. The first, desire to perform, is a function of *valences* and *instrumentalities*. A person's desire to perform well will be high when valence rewards are associated with high performance. The second outcome, effort, is a function of desire to perform and *expectancy*. Effort will be forthcoming only when individuals want to perform well and when they believe they can do so. The third outcome, performance, is a function of effort, *accurate role perceptions*, and *ability*. Performance will be high only when individuals with the requisite abilities and knowledge of desired goals and strategies put forth their best effort. The dynamic nature of the motivation process is revealed in the way present levels of performance affect future levels of valence, instrumentality, and expectancy. The complexity of the motivational process can be seen in high-performance work systems and the many issues that must be considered when one attempts to “pay for performance.”

## Review Questions

1. Recent research suggests that individual needs may be determined more by genetic factors than previously thought. Take each of the need theories described in this chapter and discuss whether this new evidence supports, contradicts, or is irrelevant to that theory.
2. Specific, difficult goals have been suggested to enhance performance, but researchers have also shown that performance will be high only when expectancies are high. You might think that, as goals become increasingly difficult, expectations for accomplishing them would decrease. Can you resolve this apparent contradiction between goal-setting theory and expectancy theory?
3. Analyst Daniel Shore once called motivation researchers “servants of power” because the results of their research were often used to manipulate lower-level workers. Is trying to motivate people necessarily exploitative? Under what conditions might providing external motivation be exploitative? Which theories of motivation do you feel are exploitative? Which ones are not?
4. Imagine two pharmaceutical companies that employ the same job categories but different business strategies. One tries to increase its market share through innovation (developing new and better drugs). The other sticks to established products and tries to increase its market share by lowering costs. Why might the two firms wind up with dramatically different pay-for-performance programs? What types of programs might be most and least suitable to each organization?

# Satisfaction and Stress

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Most organizations are not in the “job satisfaction business.” For that reason, sometimes managers find it difficult to see the importance of understanding and enhancing employees’ attitudes and feelings about their work. However, those attitudes and feelings can have important effects on the organization. As Tim Crow, Director of Human Resources at Home Depot, notes, “If people aren’t happy, they aren’t going to be happy to the customer. That’s why morale is so important in our business.”<sup>1</sup> Indeed, as we will see in this chapter, the link between quality or customer service and worker attitudes is very strong; thus, these attitudes must be considered critical even by managers who are interested only in financial profits.

Beyond the service interaction, however, attitudes are also important because they are related to employee retention, and employee retention is also related to customer retention. For example, sales agents at State Farm Insurance stay with the company on average 18 to 20 years, or two to three times the average tenure in the insurance industry. This lengthy tenure allows the average State Farm agent to learn the job and develop long-term relationships with customers that cannot be matched by competitors that may lose half of their sales staff each year. Those long-term relationships can come in handy. For example, during the economic downturn of 2008, many drivers were letting their auto insurance lapse at many other companies, but this was not the case at State Farm. Because agents at State Farm were close to their customers, they were able to call them and convince them of the importance of not driving while uninsured. In some cases, this meant scaling back coverage and, because of the high level of familiarity with their clients, these agents were able to work creatively with them to determine how best to do this. The result in terms of the bottom line is clear: State Farm agents achieve 40 percent higher sales per agent than their competition.<sup>2</sup>

Another example of this can be seen at SAS Institute, which has been rated by *Fortune* magazine among the top 20 companies to work for in America for over ten years in a row. The SAS Institute is a privately held statistical software producer that manages and analyzes databases for more than 30,000 customer sites in more than 120 countries. The programming work at SAS deals with taking data from old and incompatible systems at the user’s site and integrating it into the SAS system, where it can be analyzed for patterns and trends. Because each user’s needs are unique and idiosyncratic, the only way to provide service that is of high quality but also efficient is to establish a long-term relationship with the customer. Turnover among programmers can destroy this long-term relationship, and the high demand for computer programmers means that SAS must constantly battle other employers bent on stealing away their best employees.

Realizing this, James Goodnight, the company's CEO and majority owner, has designed a retention strategy built around employee satisfaction. Located on a spacious 200-acre campus, the company headquarters boasts ergonomically designed private offices for each employee, a free clinic staffed by two doctors and six nurse practitioners, and a 55,000-square-foot recreation facility. The facilities host break rooms that are stocked with free soft drinks, fruit, and candy, and the lunchroom includes a pianist who entertains daily. The company helps subsidize an excellent private school for the children of employees, and also offers country club memberships to all who are interested. These amenities have produced positive employee attitudes and have promoted retention. SAS has been able to experience a 4 percent rate of annual turnover in an industry where the norm is 20 percent. This has been estimated to save the company \$75 million a year in labor costs, and has been instrumental in helping the company grow from a three-person operation in 1976 to a company estimated to be worth over \$5 billion today.<sup>3</sup>

Firms that take advantage of the employee retention–customer retention link remain in the minority, however. Indeed, the massive restructurings and downsizing efforts that took place in many organizations in the last few years have left many organizations filled with dissatisfied, stressed, and insecure workers who are ready to abandon their current jobs for new opportunities at a moment's notice.<sup>4</sup> Thus, creating a stable and satisfied workforce serves as another opportunity for one firm to gain a competitive advantage over others in their industry.

This chapter focuses on the key attitudes and emotions that people experience in the workplace. We begin by defining job satisfaction and job stress. Then, to underline the importance of job satisfaction, we examine the consequences of dissatisfaction and stress, both in human terms and in terms of financial loss. Next, we review the major sources of dissatisfaction and stress in work environments. The chapter ends by discussing methods to manage dissatisfaction and stress in the workplace (see Figure 6.1 for an overview).

## Defining Satisfaction and Stress

### Satisfaction

**Job satisfaction** is “a pleasurable feeling that results from the perception that one's job fulfills or allows for the fulfillment of one's important job values.”<sup>5</sup> Our definition of job satisfaction includes three key components: values, importance of values, and perception. Job satisfaction is a function of values, that is, what a person consciously or unconsciously desires to obtain from work. Values are not the same as needs in the sense that needs are best thought of as “objective requirements” of the body that are essential for maintaining life, such as the needs for oxygen and for water. Values, on the other hand, are “subjective requirements” that exist in the person's mind.

The second component of job satisfaction is the *importance* of those values. People differ not only in the values they hold, but also in the weights they give to those values, and these differences critically influence the degree of their job satisfaction. One person may value job security above all else. Another may be most concerned with the opportunity to travel. Yet another person may be primarily interested in doing work that is fun or that helps others. Although the first person may be satisfied by long-term employment, the other two may find little satisfaction in a permanent employment relationship.

The final component of our definition of job satisfaction is *perception*. Satisfaction reflects our perception of the present situation and our values. Recall from Chapter 4 that perceptions may not be completely accurate reflections of objective reality. When they are not perfect, we

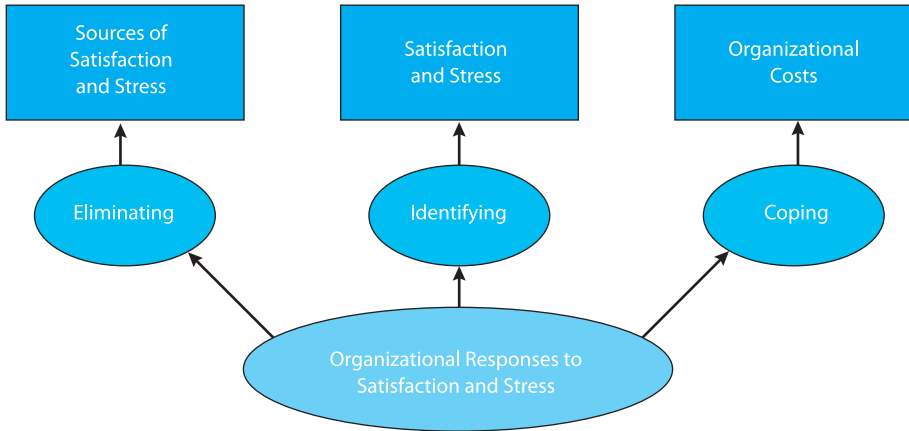


Figure 6.1 Chapter Overview

must look at the individual's perception of the situation—not the actual situation—to understand his or her personal reactions.

## Stress

**Stress** is an unpleasant emotional state that results when someone is uncertain of his or her capacity to resolve a perceived challenge to an important value.<sup>6</sup> As in the case of satisfaction, we may find it easier to understand the nature of stress if we decompose this definition into three key components. The first component, *perceived challenge*, emphasizes that stress arises from the interaction between people and their perceptions of the environment (not necessarily reality). For example, if people are afraid that they might lose their jobs, this can create the preconditions for stress.

The second component of this definition, *importance of values*, is critical for the same reason as was noted in our definition of satisfaction. Unless a challenge threatens some important value, it will not cause stress. For example, the rumored plant closing may not create stress for a worker who is already preparing to retire or a worker who sees many other better employment opportunities on the horizon.

The third component, *uncertainty of resolution*, emphasizes that the person interprets the situation in terms of the perceived probability of successfully coping with the challenge. Obviously, if people believe that they can readily cope with the challenge, they will not experience stress. Perhaps surprisingly, experienced stress is also low if the person sees no possible chance that the problem can be resolved. Under these conditions, a person tends to accept his or her fate with little emotional reaction. Stress is actually highest when the perceived difficulty of the challenge closely matches the person's perceived capacity to meet the demand. Why? As the difficulty level and the ability level approach one another, the outcome becomes increasingly uncertain. This uncertainty about meeting the challenge creates the stress, rather than the fear of a negative outcome.<sup>7</sup> For example, a 2008 poll found that just under 50 percent of workers reported that “economic uncertainty associated with fears that their company might initiate layoffs has caused them to be less productive at work.”<sup>8</sup>

The body's physiological reaction to this type of threat once had great survival value. When threatened, the human body produces chemicals that cause blood pressure to rise and divert

blood from the skin and digestive organs to the muscles. Blood fats are then released, providing a burst of energy and enhancing blood clotting in case of injury. When the individual faces a prolonged threat, other changes begin that prepare the body for a long battle. For example, the body begins to conserve resources by retaining water and salts. Extra gastric acid is produced to increase the efficiency of digestion in the absence of blood (which has been diverted away from internal organs).<sup>9</sup>

Although these physiological changes probably had adaptive value ages ago, when they readied the person either to physically fight or to flee some threat, the same changes continue to occur today in response to threats, regardless of whether the increased physical capacity they produce is adaptive. For example, workers who hold jobs characterized by many demands over which the employees have little control are three times more likely to suffer from high blood pressure than other workers. The increased physical capacity gained through higher blood pressure will not, however, help these workers cope with the demands they face, and hence they become counter-productive at work.

Moreover, in evolutionary terms, stress episodes typically were events that played out quickly, but this is no longer the case. People might be worried about their situation at work for extended periods, and Hans Selye, a prominent physician and researcher, proposed the **general adaptation syndrome** which describes the relationship between long-term stress and these physical-physiological symptoms. According to Selye, the body's reaction to chronic stress occurs in three stages (Figure 6.2). In the *alarm stage*, the person identifies the threat. Whether this threat is physical (a threat of bodily injury) or psychological (the threat of losing one's job), the physiological changes described previously ensue. In the *resistance stage*, the person becomes resilient to the pressures created by the original threat. The symptoms that occurred in the alarm stage disappear, even though the stressor remains in place. Resistance seems to rely on increased levels of hormones secreted by the pituitary gland and the adrenal cortex.<sup>10</sup>

If exposure to the threatening stressor continues, the person reaches the *exhaustion stage*. Pituitary gland and adrenal cortex activity slows down, and the person can no longer adapt to

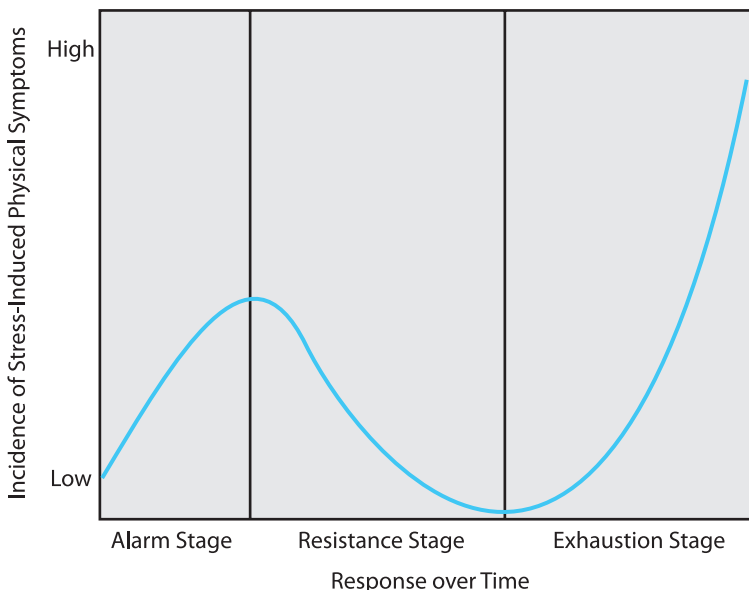


Figure 6.2 The General Adaptation Syndrome

the continuing stress. Many of the physiological symptoms that originally appeared in the alarm stage now recur. If stress continues unabated, individuals may suffer **burnout**, which can lead to severe physical damage, including death via coronary failure or heart disease.<sup>11</sup> As a reactive defense mechanism, workers who are burned out also tend to depersonalize the clients or customer they are trying to serve, which further destroys quality of service. Thus, burnout has to be prevented and, as we will discuss in more detail later, interventions that help create social support within work groups can often help along these lines.<sup>12</sup>

## Organizational Costs of Dissatisfaction and Stress

The previous section focused on the effects of dissatisfaction and stress as measured in terms of human physiology. In this section, we examine the costs of dissatisfaction and stress from an organizational effectiveness perspective. That is, even if we coldly ignore the human costs, important financial reasons exist for monitoring and managing the satisfaction and stress levels of employees.

### Performance at the Individual and Organizational Level

Although it was once believed that job satisfaction and job performance were not strongly related, a recent comprehensive analysis of studies that involved 312 organizations and 54,417 employees has revealed a significant, positive correlation between these two variables.<sup>13</sup> A subsequent analysis that examined the timing of effects also makes it clear that, in terms of causal order, attitudes are a cause and not an effect of higher performance.<sup>14</sup> Employees who are highly engaged with their work put in longer hours and generally see work as its own reward, creating less of a need to set up financial incentives, which as we saw in our last chapter can often backfire.<sup>15</sup> The satisfaction–performance link is especially strong in the service industry where employees have direct, face-to-face contact with customers.<sup>16</sup> In service contexts, there seems to be a direct transfer of attitudes from employees to customers.<sup>17</sup> This relationship was expressed well by a manager at United Airlines, who during a recent period of labor unrest stated that “you can’t run a service business when you are at war with your employees.”<sup>18</sup>

One might wonder whether the relationship between the attitudes of individual workers and their own performance actually translates to higher levels of organizational performance as measured via traditional financial performance indicators, and the evidence is clear that it often does. A recent study by *Fortune* magazine compared the financial performance of the “100 Best Companies to Work For” with a closely matched set of firms that were the same size and in the same industry. In terms of operational performance, the results of this study showed that between 1995 and 2000 the return on assets for the 100 best was 9.3 percent versus 7.3 percent for the control firms. In terms of stock market perceptions, the market-to-book ratio for the 100 best firms was 4.5 versus 2.0 for the controls, suggesting that investors appreciate the competitive value inherent in having a stable and satisfied workforce.<sup>19</sup>

### Healthcare Costs

As noted earlier, work-related stress has the potential to greatly affect a person’s health and well-being. A fact of current organizational life is that employing organizations bear much of the cost for employee healthcare. Although wages have risen during the last 30 years, spiraling medical fees and hospital room-and-board charges have increased the cost of patient insurance by three times as much as wage increases over the same period. Indeed, medical



insurance and claims costs currently constitute a full 12 percent of payroll for U.S. companies.<sup>20</sup> Analysts have cited legacy costs associated with having to cover employee health expenditures as the single most important factor in explaining the inability of U.S. auto manufacturers to compete with foreign competitors.<sup>21</sup>

Besides paying for general health insurance, employers are increasingly finding themselves held liable for specific incidents of stress-related illness. The Occupational Safety and Health Act of 1970 (OSHA) and many state laws hold employing organizations accountable “for all diseases arising out of and in the course of employment.”<sup>22</sup> Since research has shown a strong link between stress and mental disorders, this made it possible for an overworked advertising executive who was the victim of a nervous breakdown to successfully sue his employer.<sup>23</sup> Stress and dissatisfaction have also been linked to problem drinking by employees, which can result in direct costs associated with treating these problems, as well as indirect costs associated with increased absenteeism and reduced safety levels associated with problem drinkers at work.<sup>24</sup>

### **Absenteeism and Turnover**

Dissatisfaction and stress not only create direct costs for organizations (that is, healthcare program expenditures), but also are the source of indirect costs—most notably in the form of absenteeism and turnover. Dissatisfaction is a major reason for absenteeism, an organizational problem that has been estimated to cost \$74 billion annually for the overall U.S. economy.<sup>25</sup>

Dissatisfaction also triggers organizational turnover. Replacing workers who leave the organization voluntarily is a costly undertaking. For example, according to a 2008 survey, the cost to replace a single worker ranged from \$28,000 (manufacturing) to \$40,000 (bio-technology) depending upon the industry.<sup>26</sup> In addition to replacement costs, when workers depart from these jobs, companies lose the knowledge and expertise they may need to be successful. In our last chapter, we noted how it takes extended practice and repetition, sometimes as much as ten years, to truly develop expertise. Thus, turnover among experienced personnel can be especially damaging.

An excellent recent example of this can be seen at the Federal Aviation Authority, the group that oversees airline safety. The majority of air traffic controllers who currently work for this agency were hired in the mid-1980s after then-President Ronald Reagan fired over 10,000 controllers who were illegally striking. Now, 25 years later, most of these controllers are nearing the age of retirement, and the FAA is desperately trying to retain these workers for as long as possible, in order to help ease the transition to a younger, less experienced workforce. The problem, however, is that job dissatisfaction among current controllers is very high, and a mass exodus is taking place. As one departing controller noted, “it is only a matter of time before an accident occurs, and the pervasive feeling among experienced controllers is that I don’t want to be there when it happens.”<sup>27</sup>

Although safety is the major concern with an organization like the FAA, in the world of business, the worst case is when unhappy, but experienced, employees take jobs with competitors. A company’s investment in employee development is then not only lost, but actually winds up as a bonus for a competing firm that gains access to a great deal of knowledge about the competition’s operations. This has recently been a problem at Google, where many of its young and talented employees are leaving the organization to try to create their own start-up companies. Many of the ideas for these new start-ups were conceived while these people were working for Google and, all else equal, Google would rather retain these workers and their ideas than try to compete against them, which is why Google works harder than most organizations to try to keep all its workers happy.<sup>28</sup>

### Low Organizational Commitment and Poor Citizenship

Dissatisfaction also contributes to declining organizational commitment. **Organizational commitment** is the degree to which people identify with the organization that employs them. It implies a willingness on the employee's part to put forth a substantial effort on the organization's behalf and his or her intention to stay with the organization for a long time. The subject of organizational commitment has recently attracted a great deal of attention. Many employers fear that the downsizing policies pursued so aggressively by U.S. companies have killed company loyalty. Evidence provided by surveys of U.S. workers bolsters this claim. When asked if employees today are more loyal or less loyal to their companies compared with ten years ago, 63 percent said less loyal, and only 22 percent said more loyal.<sup>29</sup>

Unlike U.S. manufacturers, companies like Toyota are committed to no-layoff policies, even in bad economic times, and this leads to a much more loyal workforce. For example, even during the recent economic downturn, when no one was buying cars, domestic or foreign, Toyota avoided layoffs. Even though production was halted, workers came in every day and were either assigned duties to help repair and maintain facilities or were sent to training programs. As Toyota general manager Latondra Newton noted at the time, "We're not just keeping people on the payroll because we're nice. At the end of all of this, our hope is that we'll end up with a more skilled and loyal workforce."<sup>30</sup>

Although formal performance evaluation systems may often prevent someone who is dissatisfied from expressing his or her unhappiness directly (that is, through poor job performance), dissatisfaction may nevertheless have a negative effect on **organizational citizenship behaviors** (OCBs).<sup>31</sup> OCBs are acts that promote the organization's interest, but are not formally a part of any person's documented job requirements. They include behaviors such as volunteering for assignments, going out of one's way to welcome new employees, helping others who need assistance, staying late to finish a task, or voicing one's opinion on critical organizational issues.<sup>32</sup>

OCBs tend to make the organization run more smoothly, but dissatisfied employees rarely engage in them. Instead, employees seem to take a reciprocating approach to these kinds of behaviors; that is, they show a willingness to engage in them only if they feel that the employer goes out of its way as well. For example, one recent study conducted at Fel-Pro, an engine gasket manufacturing firm in the Midwest, showed that OCBs were high, but only among employees who believed that the company's work-life benefits program helped them and their families.<sup>33</sup> Another study showed that OCBs declined when workers became emotionally exhausted owing to an increase in the number of hours worked, suggesting a quality-quantity trade-off when it comes to stretching workers too far.<sup>34</sup>

### Workplace Violence and Sabotage

In the last 20 years, violence in the workplace has developed into a major organizational problem. Workplace homicide is the fastest-growing form of murder in the United States. In terms of being a target of violence, this is especially a problem for women and for supervisors. For example, workplace homicide is the leading cause of death in the workplace for women.<sup>35</sup> Also, although the target of violence can be co-workers, subordinates, or customers, the most likely target tends to be supervisors.<sup>36</sup> Moreover, homicide is merely the most extreme example of workplace violence—other forms of work-related violence are also proliferating. In any given year, 2 million employees are physically attacked, 6 million are threatened with physical attack, and 16 million suffer from some form of harassment. In terms of being an initiator of violence, this is especially a problem for young and uneducated workers.<sup>37</sup> Most

violence that involves organizational insiders is triggered by extreme levels of dissatisfaction and stress on the part of the attacker and, although most people close to the attacker report being aware of their dissatisfaction, almost all were surprised by the violent response.<sup>38</sup>

Organizational sabotage is violence directed at property rather than people. Workers who are dissatisfied may either consciously or subconsciously produce faulty products. This can have disastrous effects for both consumers and the company. For example, problems with Firestone tires that were blamed for the deaths of 119 people and 180 legal suits against the company were eventually traced to the actions of disgruntled workers during a period of labor unrest. Failure on the part of workers to follow written protocols regarding how to treat the “steel” part of steel-belt radial tires led to tread separation problems that resulted in a large number of accidents. The cost of these safety breakdowns in terms of human life and suffering is incalculable, but the financial repercussions of these failures for Firestone can be well documented. The company was eventually forced to pay out over \$40 million in lawsuits and lost over 60 percent of its customer base to competing firms—including the Ford Motor Company, a huge demander of tires that had a long-term, steady relationship with Firestone prior to the incident. The plant where the tires were produced was eventually closed down, putting strikers, strikebreakers, and managers out of their jobs.<sup>39</sup>

Although traditionally organizational sabotage was seen as dealing with vandalism or theft, it is now increasingly being directed at computer information systems. These systems, while protected from external tampering, remain highly vulnerable to manipulation by insiders. For example, Omega Engineering suffered \$10 million in losses after one very dissatisfied employee unleashed a software program (a “logic bomb”) that deleted critical computer files.<sup>40</sup> Erecting technical barriers to this kind of act, while simultaneously fostering the widespread use of technology within an organization, can be difficult. Often, the only way to prevent such acts is to monitor and eliminate the dissatisfaction that motivates the behavior in the first place.

## Sources of Dissatisfaction and Stress

Certain inherent features of organizations can cause dissatisfaction and stress. In this section, we focus on the physical and social environment, the person, the task, and the role.

### Physical and Social Environment

A wealth of evidence shows that some physical features of the workplace can stimulate negative emotional reactions in workers. For example, studies have shown that *extremes in temperatures* can affect job attitudes as well as performance and decision making. Moreover, research on how people perceive tasks has shown that physical features of the environment, such as *cleanliness*, *working outdoors*, and *health hazards*, are very important in the way people perceive their tasks.<sup>41</sup> In some cases, all of these negative features come together in one job, and the dissatisfying nature of this work makes it necessary to pay workers a premium just to accept the positions. For example, at the U.S. State Department, the only way the organization could staff the U.S. Embassy in Iraq was to offer pay rises in excess of 70 percent, and in some cases even this was not enough.<sup>42</sup>

Of course, one does not have to work outside to suffer from hazards. Recent studies have focused on some very subtle characteristics of the physical environment. Researchers have coined the term *sick-building syndrome* to describe physical structures whose indoor air is contaminated by invisible pollutants. Today, many new buildings are constructed with windows that do not open, which means that workers in these buildings breathe a great deal

of recycled air. This air can contain a mixture of carbon monoxide sucked into a building from air intake vents that overhang parking lots, ozone discharged from office printers, chemicals that are emitted by paint, carpet, or new furniture, and even bacteria funneled through heating, ventilation, and cooling systems. This problem has gotten so bad that the U.S. Environmental Protection Agency recently ranked indoor air as one of the top five environmental health risks of our time.<sup>43</sup>

In terms of the social environment, supervisors and co-workers serve as the two primary sources of satisfaction or frustration for the employee. The employee may be satisfied with a supervisor because he or she helps the employee attain some valued outcome, or because they share similar values, attitudes, or philosophy. The greatest degree of satisfaction with supervisors occurs where both kinds of attraction exist, and the negative outcomes associated with abusive supervisors are particularly pronounced.<sup>44</sup> In fact, data from exit interviews show that 75 percent of the reasons cited for leaving a job can be directly tied to the actions or decisions of the direct supervisor.<sup>45</sup> Lack of support or incivility from co-workers, however, also has measurable effects on employee satisfaction, health, and turnover.<sup>46</sup> This effect is especially pronounced in organizations that rely on self-managing team-based structures or in situations where people are working in crowded conditions.<sup>47</sup>

In addition to their direct effects on satisfaction, supervisors and co-workers may also be able to buffer their fellow workers from other harmful stressors by providing social support. **Social support** is the active provision of sympathy and caring. Many researchers have suggested that social support from supervisors and co-workers can buffer employees from stress. Figure 6.3 illustrates the notion behind **buffering**. As shown in the figure, the presence of people who are supportive can lower the incidence of stress-related symptoms under conditions of high stress. Evidence for this effect has come largely from research in medical contexts, which shows that recovery and rehabilitation from illness proceed better when the patient is surrounded by caring friends and family. The same seems true for work-related stress—for example, a study of nurses working in stressful units showed that those who received social support were much better able to perform their jobs.<sup>48</sup>

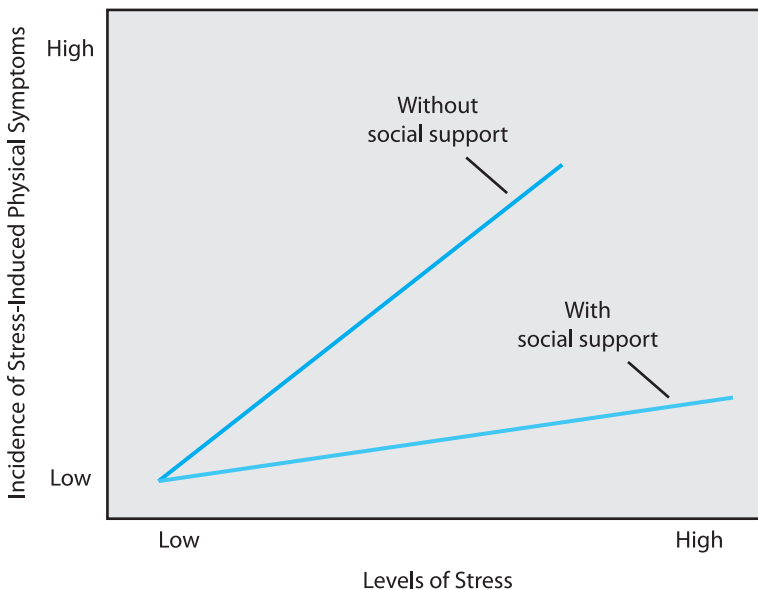


Figure 6.3 How Social Support May Buffer Stress

The physical and social aspects of work converge to create the behavior setting. Two important and interrelated aspects of the behavior setting are social density and privacy. **Social density**, a measure of crowding, is calculated by dividing the number of people in a given area by the number of square feet in that area. **Privacy** is the freedom to work without observation or unnecessary interruption.

### **Personal Dispositions**

Because both stress and dissatisfaction ultimately reside within a person, many researchers who have studied these outcomes have focused on individual differences. The term **negative affectivity** describes a dispositional dimension of subjective distress that includes such unpleasant mood states as anger, contempt, disgust, guilt, fear, and nervousness.<sup>49</sup> Negative affectivity is similar to the construct of emotional stability (discussed in Chapter 3) and tends to remain quite stable over time. In fact, recent research has shown that the work attitudes of adults can be predicted from measures of emotional stability and negative affectivity collected when those individuals were children.<sup>50</sup> People who are generally high in negative affectivity tend to focus on both their own negative qualities and those of others. Such people are also more likely to experience significantly higher levels of distress than are individuals who rate low on this dimension. It highlights the fact that some people bring stress and dissatisfaction with them to work, and that these workers may remain relatively dissatisfied regardless of what steps are taken by the organization or the manager.<sup>51</sup>

At the extreme, negative affectivity can turn into clinical depression, which is responsible for the loss of more than 200 million working days in the United States each year. More than 3,000 psychiatric claims are filed annually with the Equal Employment Opportunity Commission, making this category the single largest type of claim brought under the Americans with Disabilities Act.<sup>52</sup> Managers facing this type of problem need to work with mental health professionals (in employee assistance programs, for example) to help make the kinds of accommodations necessary to get their employees back into a healthy and productive mode.<sup>53</sup>

One constellation of individual-differences variables that also has been linked to job satisfaction and performance has been labeled **core self-evaluation**. An individual's core self-evaluation is defined by his or her standing on four different traits, and includes being high in self-esteem, high in generalized self-efficacy, high in emotional stability, and high in internal locus of control (i.e., in the belief that one can control one's own destiny through actions and is not a victim of fate). A longitudinal study that started with young people in 1979 and then followed them for a period of 25 years found that those who were initially high in core self-evaluation wound up with much higher salaries and job satisfaction relative to people who are low in this characteristic.<sup>54</sup>

One final critical individual-difference variable for predicting stress is the Type A behavior pattern. People with Type A personalities are characterized as being aggressive and competitive, as setting high standards for themselves and others, and as putting themselves under constant time pressure. People with Type B personalities, on the other hand, lack such feelings of urgency. The unrealistic expectations of the impatient, ambitious, and overly aggressive Type A person render him or her particularly susceptible to dissatisfaction and stress. This susceptibility may also account for the fact that the Type A person has twice the risk, as compared with the Type B person, of developing coronary heart disease.<sup>55</sup>

## Organizational Tasks

Although we cannot entirely discount the influence of dispositional traits and nonwork experiences, nothing predicts a person's level of workplace satisfaction or stress better than the nature of the work itself.<sup>56</sup> Table 6.1 lists some of the most and least stressful jobs. Innumerable aspects of tasks have been linked to dissatisfaction and stress. In general, the key factors that determine satisfaction and stress are task complexity, physical strain, and task meaningfulness.

### Task Complexity

Although in extreme cases tasks can become overly complex, research generally shows a positive relationship between task complexity and satisfaction. The boredom generated by simple, repetitive jobs that are not mentally challenging has been consistently found to frustrate most workers.<sup>57</sup> This frustration, in turn, manifests itself as dissatisfaction, stress, and ultimately tardiness, absenteeism, and turnover. In some cases, external interventions can alleviate the boredom inherent in these kinds of jobs. For example, research suggests that, for some simple jobs, allowing employees to use personal stereos increases both performance and satisfaction.<sup>58</sup>

Boredom created by lack of task complexity can also hinder performance on certain types of jobs. For example, airport security personnel, air traffic controllers, operators in nuclear power stations, medical technicians, and inspectors on production floors all belong in a class of jobs that require *vigilance*. Such workers must continually monitor equipment and be prepared to respond to critical events. Because such events are rare, however, these jobs are exceedingly boring and hence workers are vulnerable to poor concentration. Ultimately, this inattention may result in performance breakdowns, often with serious consequences.<sup>59</sup>

### Physical Strain

Another important determinant of work satisfaction is the amount of physical strain and exertion involved in the job. This factor is sometimes overlooked in the present age of technology, where much of the physical strain associated with jobs has been removed by automation. Indeed, the very fact that technology continues to advance highlights the degree to which physical strain is universally considered an undesirable work characteristic. Many jobs, particularly those in certain manufacturing industries and in the protective services (police and fire), however, can still be characterized as physically demanding, and it is difficult or impossible to totally eliminate this aspect of the work in those jobs.

**Table 6.1** Jobs Characterized as High and Low in Stress

<i>High-stress jobs</i>	<i>Low-stress jobs</i>
Manager	Farm laborer
Supervisor	Craft worker
Nurse	Stock handler
Waitress	College professor
Air traffic controller	Heavy-equipment operator

### *Task Meaningfulness*

Once one gets beyond the boring and physically demanding nature of work the next most important factor is the degree to which it is meaningful. In our previous chapter on motivation, we discussed how this is a critical aspect of the task when it comes to getting people energized. When people believe that their work has an important impact on other people, they are much more willing to work longer hours.<sup>60</sup> In contrast, when people feel the work does not have meaning, they often react negatively and seek to find alternative employment.<sup>61</sup> For example, after the terrorist attacks on 9/11, many investment brokers in New York City quit their jobs despite the high pay. In the words of one Goldman Sachs employee, “It got to the point where everybody wound up working only for the money, and after 9/11, I was in search of more soulful work.”<sup>62</sup>

The term **empowerment** has been used to define work that is not only meaningful, but also characterized by autonomy. Empowered workers feel that they can display their competence and make a positive impact on the world—or at least their little corner of it. This belief, in turn, creates a high level of intrinsic motivation that results in high job performance and organizational commitment.<sup>63</sup> For example, at Best Buy headquarters in Minneapolis, the company initiated a program called Results Only Work Environment (ROWE) that eliminated punch clocks and formal scheduling. The program also allowed employees to determine not only their own hours, but also how, when, and where the work was conducted. The program resulted in decreased turnover and costs, and most indicators of productivity actually increased after the change, even though people were spending less physical time at the headquarters itself.<sup>64</sup>

Because empowerment often entails a delegation of authority from supervisors to subordinates, the positive effects of empowering workers tend to be culturally specific. Some countries, such as the United States, are relatively low in power distance (that is, low in terms of accepting status differences between people). In these cultures, empowerment leads to high satisfaction with supervision. On the other hand, in cultures that are high in power distance, such as India, such a program is seen as an abdication of responsibility and leads to dissatisfaction with supervision.<sup>65</sup> We will have much more to say about power distance in Chapter 15, when we deal with international issues.

### **Organization Roles**

The person and the social environment converge in the form of an **organization role**. The person’s role in the organization can be defined as the total set of expectations of the person held by both the person and others who make up the social environment. These expectations of behavior include both the formal aspects of the job and the informal expectations of co-workers, supervisors, clients, and customers. They greatly influence how the person responds to the work. Three of the most heavily researched aspects of roles are role ambiguity, role conflict, and role scope.

#### *Role Ambiguity*

**Role ambiguity** consists of the uncertainty or lack of clarity surrounding expectations about a person’s role in the organization. It indicates that the worker does not have enough information about what is expected. Role ambiguity can also stem from a lack of information about the rewards for performing well and the punishments for failing. For example, imagine that your college instructor has assigned a term paper but neglected to tell you (1) what topics are

pertinent, (2) how long the paper should be, (3) when it is due, (4) how it will be evaluated, and (5) how much it is worth toward the final course grade. Clearly, most people would feel stress under these circumstances, a reaction that can be directly attributed to role ambiguity. High levels of role ambiguity are also associated with lower task performance and the intention to quit one's job.<sup>66</sup>

### Role Conflict

**Role conflict** is the recognition of incompatible or contradictory demands that face the person who occupies a role. It can take many different forms. *Intersender role conflict* occurs when two or more people in the social environment convey mutually exclusive expectations. For example, a middle manager may find that upper management wants to institute severe reprimands for worker absenteeism, whereas the workers expect greater consideration of their needs and personal problems. *Intrasender role conflict* occurs when one person in the social environment holds two competing expectations. For example, a research assistant for a magazine editor may be asked to write a brief but detailed summary of a complex and lengthy article from another source. In attempting to accomplish this task, the assistant may experience considerable distress when trying to decide what to include and what to leave out of the summary. A third form of role conflict is *interrole conflict*. Most people occupy multiple roles, and the expectations for our different roles may sometimes clash. A parent who has a business trip scheduled during a daughter's first piano recital, for example, is likely to feel torn between the demands of two roles.

Earlier in this chapter, we noted the relatively higher level of financial performance associated with companies that were part of the top 100 best companies to work for as rated by *Fortune* magazine. In terms of how one gets into the top 100, it is instructive to see how many of them directly support their workers in terms of helping them manage role conflict that spills over from life to work. Of the top 100, 26 offer on-site day care and 29 offer concierge services.<sup>67</sup> Thirty-one percent of these companies offer fully paid sabbaticals, in recognition of the fact that time off for renewal is a major aspiration for many of today's most talented workers.<sup>68</sup>

### Role Scope

**Role scope** refers to the absolute number of expectations that exist for the person occupying a role. Earlier we noted that work that is boring is generally dissatisfying, but the flip side of this problem is the *role overload* situation where there are too many expectations or demands placed on the role occupant. A 2008 survey suggested that role overload is the number one cause of stress at work, with 48 percent of respondents suggesting that this can be attributed to having to do more work with less resources.<sup>69</sup> Several aspects of modern workplaces have created problems in the area of role scope. First, layoffs and reductions in the labor force have often left fewer people to do more work in many large companies. For example, in the United States, there has been a rash of litigation aimed at employers who have denied workers traditional lunch breaks. At least a dozen employers were fined over \$1 million in 2008 for this specific infraction of the labor laws, with Wal-Mart leading the way with a \$172 million penalty.<sup>70</sup> More seriously, in France, investigations into five separate suicides that took place at a design factory in Paris uncovered notes from workers who complained of unreasonable workloads and exhaustion.<sup>71</sup>

Second, telecommunications advancements have made it easier for people to take their work home with them. Thus, whereas much of the rest of the developed world has cut back



on the number of hours worked per person per year, the United States has gone in the other direction, actually increasing the number of hours worked per year. In addition, in 2002 the average U.S. worker took 12 vacation days, which is half of that taken by Japanese and British workers, one-third of that taken by workers in France and Germany, and one-fourth of that taken by Italians—world leaders in vacation time among industrialized nations.<sup>72</sup> Some are concerned that this is taking a toll on people in terms of stress and health, and have argued that U.S. firms need to strike a better balance between the work and nonwork lives of employees. Indeed, the negative effects of expanding work hours seem to be particularly pronounced for women, who still bear a greater responsibility for housework relative to men, regardless of their employment status.<sup>73</sup>

## **Eliminating and Coping with Dissatisfaction and Stress**

Because the costs associated with employee dissatisfaction and stress can be high, identifying these factors should be a major part of the job description of every manager. Once identified, interventions should target the source of the stress. If it is impossible to eliminate the stressor for some reason, then the manager should at least help employees manage and cope with the stress. In this section, we discuss how to identify, eliminate, and manage dissatisfaction and stress in the workplace.

### **Identifying Symptoms of Dissatisfaction and Stress**

In some cases, employees are afraid to admit that they are stressed and cannot overcome some problem associated with their work. In other cases, workers who are dissatisfied with some facet of their job may not speak out to avoid sounding like chronic complainers. Finally, in yet other cases, the attitudes of some workers may have become so bad that they view reporting dissatisfaction as a waste of time. For this reason, it is critical for managers to monitor the kinds of attitudes via a regular, systematic, and anonymous employee survey program.

Most attempts made to measure worker satisfaction rely on self-reports. A vast amount of data has been gathered on the reliability and validity of many existing scales, and a wealth of data is available on companies that have used these scales in the past, which allows for comparisons across firms. Established scales are excellent starting points when employers seek to assess the satisfaction levels of their employees. An employer would be foolish to “reinvent the wheel” by generating its own versions of measures of these broad constructs. Of course, in some cases, an organization may want to measure its employees’ satisfaction with aspects of their work that are specific to that organization (for example, satisfaction with one health plan versus another health plan). In these situations, the organization may need to create its own scales. This scenario will be the exception rather than the rule, however.

Regardless of which measures are used or how many facets of satisfaction are assessed, a systematic, ongoing program of employee survey research should be a prominent component of any retention strategy for a number of reasons. First, it allows the company to monitor trends over time, thereby enabling the firm to prevent problems in the area of voluntary turnover before they happen. Indeed, one of the most critical trends to watch is the percentage of people who comply by filling out such surveys, because employees who are not willing to be surveyed often have the most negative attitudes.<sup>74</sup>

Second, an ongoing program of survey research provides a means of empirically assessing the effects of changes in policy (such as the introduction of a new performance appraisal system) or personnel (such as the introduction of a new CEO) on worker attitudes. Moreover, when these surveys incorporate standardized scales, they often allow the company to compare

itself with others in its industry along the same dimensions. If the firm detects major differences between the organization and the industry as a whole (for example, in satisfaction with pay levels), the company might be able to react and change its policies before it experiences a mass exodus of people moving to the competition.

Finally, with the advent of increased networking capacity in many organizations, the cost of conducting online surveys has never been lower. Computerized versions of many scales perform as well, if not better, when administered over a company's intranet. In addition, the results can be calculated more quickly. Some programs even allow the worker to see where he or she stands relative to co-workers immediately after filling out the survey.<sup>75</sup>

Conducting an organizational opinion survey is not a task that should be taken lightly, because such surveys often raise expectations. For this reason, the organization conducting the survey should be prepared to act on the results if they hope to see any benefit from future surveys. For example, at Sun Healthcare Group, turnover rates among nurses, nurses' aides, and technicians ran at over 150 percent a year. In order to determine the cause of this, the organization conducted an anonymous online survey that revealed unambiguously that employees wanted more opportunities to develop their skills and advance their careers. The organization responded by creating access to training programs that enrolled close to 2,000 workers. Turnover was reduced to 25 percent just three years later, and more and more hiring was based upon employee referrals from nurses who had upgraded their skills and were promoted to higher-level jobs in the system.<sup>76</sup>

### **Eliminating Dissatisfying and Stressful Conditions**

Because the nature of the task influences dissatisfaction and stress so strongly, some of the most effective means of reducing negative reactions to work focus on the task. Job enrichment methods include many techniques designed to add complexity and meaning to a person's work. As the term *enrichment* suggests, this kind of intervention targets jobs that are boring because of their repetitive nature or low scope. Although enrichment cannot always improve all employees' reactions to work, it can prove very useful. This topic will be covered in more depth in Chapter 7 on work design.

Role problems rank immediately behind job problems in terms of creating distress. The role analysis technique is designed to clarify role expectations for a jobholder by improving communication between the person and his or her supervisors, co-workers, subordinates, and perhaps even customers. In role analysis, both the jobholder and the role set members write down their expectations, and then these people gather together to review their lists. Writing down all expectations ensures that ambiguities can be removed and conflicts identified. Where conflicts arise, the group as a whole (perhaps with the assistance of a group facilitator) tries to decide how to resolve these problems. When this kind of analysis is done throughout an organization, instances of overload and underload may be discovered and role requirements may be traded off, allowing for the development of more balanced roles.

*Skills training* is a means of trying to help the employee change a dissatisfying or stressful condition. For example, at University of Chicago Hospital, many technical employees struggled with interpersonal tasks associated with customers, resulting in conflict with clients and stress at work. Training programs in customer service, critical thinking, and situational judgment were provided, and the technicians were each encouraged to develop their own "Ideal Patient Encounter" associated with their specific job. Complaints from patients dropped precipitously, and the reduction in conflict led to less stress for the technicians, as well as a 33 percent reduction in turnover in those job categories. With this type of training, participants decide on their most important work values. They then learn how to pinpoint

goals, identify roadblocks to successful goal accomplishment, and seek the collaboration of co-workers in achieving these goals.<sup>77</sup> In general, skills training gives job incumbents the ability to better predict, understand, and control events occurring on the job, which in turn reduces stress. That is, being able to understand and control these events weakens the effect of perceived stress on job satisfaction.<sup>78</sup>

A person's ability to handle dissatisfying or stressful work experiences is also enhanced when the worker has an opportunity to air any problems and grievances. The formal opportunity to complain to the organization about one's work situation has been referred to as **voice**.<sup>79</sup> Having voice provides employees with an active, constructive outlet for their work frustrations, and leaders who provide voicing opportunities experience less turnover among their direct reports. One step beyond voicing opinions is the chance to take action or make decisions based on one's opinions. *Participation in decision making* (PDM) provides opportunities for workers to have input into important organizational decisions that involve their work and has been found to reduce role conflict and ambiguity. For example, turnover at Crouse Hospital in Upstate New York was reduced from 49 percent to 18 percent after initiating a program that promoted formal, small group discussion about how to improve patient care at every level of the organization. In addition to the reduction in turnover, cost savings and increased customer service led to an \$11 million net gain in 2007 that compared very favorably to the \$15 million net loss the hospital recorded prior to the program.<sup>80</sup>

### Managing Symptoms of Dissatisfaction and Stress

In some situations, organizations may not be able to sufficiently alter roles, tasks, or individual capacities to reduce dissatisfaction and stress. Here interventions must be aimed at the symptoms of stress. Although not as desirable as eliminating the stressors themselves, eliminating the symptoms is better than no action at all. Some interventions that fall into this category focus exclusively on physiological reactions to stress.

Physical conditioning, particularly in the form of *aerobic exercise*, helps make a person more resistant to the physiological changes, such as high blood pressure, that accompany stress reactions. Many organizations, such as Google, provide on-site gyms in order to promote employee exercise. Another approach to treating stress symptoms is to employ *relaxation techniques*. Under a severe amount of stress (as when preparing a fight-or-flight response), many of the body's muscles tighten. Relaxation programs focus on eliminating tenseness in most of the major muscle groups, including the hand, forearm, back, neck, face, foot, and ankle. Relaxing these muscle groups lowers blood pressure and pulse rate and reduces other physiological stress manifestations, and hence many organizations offer employees training in this skill.<sup>81</sup>

At one time, it was thought that people had no voluntary control over their physiological responses. **Biofeedback** machines, which allow a person to monitor his or her own physiological reactions, have since changed that perception. Indeed, with the appropriate feedback, some people can learn to control brain waves, muscle tension, heart rate, and even body temperature. Biofeedback training teaches people to recognize when these physiological reactions are taking place as well as how to ameliorate these responses when under stress.<sup>82</sup>

A socially supportive environment can reduce stress and buffer employees from stress caused by aversive working conditions.<sup>83</sup> For this reason, many organizations encourage employees to participate in team sports both at work and in their off hours. Ideally, softball and bowling leagues will increase group cohesiveness and support for individual group members through socializing and team effort. Although management certainly cannot ensure

that every stressed employee will develop friends, it can make it easier for employees to interact on a casual footing.

Other means of coping with stress that cannot be eliminated at the source focus on allowing the person time away from the stressful environment. Although a person may not feel capable of handling the stress or dealing with the dissatisfying aspects of a particular job indefinitely, it is often possible to do so temporarily. Many employers employ **job rotation**—that is, moving workers from one job to another temporarily—in an effort to give workers a break from stress. Job rotation can do more than simply spread out the stressful aspects of a particular job. It can increase the complexity of the work and provide valuable cross-training in jobs, so that any one person eventually comes to understand many different tasks.

Finally, if the company cannot change the negative aspects of a job, managers should be honest with prospective jobholders about the nature of the work. Many companies hesitate to mention the undesirable aspects of a job when trying to recruit workers for fear that no one will take the job. Fooling someone into taking a job in which he or she would not otherwise be interested, however, is not good for the company or the person. The ultimate result is increased turnover. **Realistic job previews** (RJPs) lower expectations and are likely to attract workers whose values more closely match the actual job situation. RJPs are especially important for applicants who lack work experience or who are going to be working in foreign locations.<sup>84</sup>

## Summary

Among the great variety of attitudes and emotions generated in the workplace, the most important are *job satisfaction* and *occupational stress*. Job satisfaction is a pleasurable emotional state resulting from the perception that a job helps the worker attain his or her valued outcomes. Occupational stress, an unpleasant emotional state, arises from the perceived uncertainty that a person can meet the demands of a job. Multiple responses to stress are possible, including physiological responses, behavioral responses, and cognitive reactions. These stress reactions have important consequences for organizations, particularly in terms of the financial costs of healthcare, absenteeism, turnover, and performance failures. Dissatisfaction and stress originate from several sources: the *physical* and *social environment*, the *person*, the *organizational task*, and the *organization role*. A number of different intervention programs can be implemented to eliminate the stress-inducing event, enable the person to avoid or cope with the stressor, or, failing these efforts, at least eliminate the symptoms of stress. These measures include *job enrichment*, *skills training*, *biofeedback*, *job rotation*, and *realistic job previews*.

## Review Questions

1. Recall from Chapter 1 some of the many roles that a manager must play. Which of these roles do you think create the most stress? Which are probably the least stressful? From which role do you think most managers derive their greatest satisfaction? Compare your answers to these three questions and speculate on the relationship between satisfaction and stress for managerial employees.
2. Organizational turnover is generally considered a negative outcome, and many organizations spend a great deal of time, money, and effort trying to reduce it. Can you think of any situations in which an increase in turnover might be just what an organization needs? What are some steps organizations might take to enhance functional types of turnover?
3. Characteristics like negative affectivity and the Type A behavior pattern are associated

with aversive emotional states including dissatisfaction and stress. Do you think these tendencies are learned or genetically determined? If they are learned, from a reinforcement theory perspective, what reinforcers might sustain the behaviors associated with them?

4. If off-the-job stress begins to spill over and create on-the-job problems, what do you think are the rights and responsibilities of managers in helping employees overcome these problems? If employees are engaged in unhealthy off-the-job behavior patterns such as smoking, overeating, or alcohol abuse, what are the rights and responsibilities of the employer to change these behaviors? Are such efforts an invasion of privacy? Or do they simply constitute a prudent financial step taken to protect the firm's well-being?

# Meso Organizational Behavior

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# Efficiency, Motivation, and Quality in Work Design

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Few people can build a car by themselves, but companies like Ford, Toyota, and Volkswagen turn out thousands of cars every year by dividing car building into simple assembly-line jobs. Likewise, insurance policies cannot be underwritten by individuals working alone, but companies like Allstate, State Farm, and Prudential succeed by breaking down policy preparation into a number of less complicated clerical tasks. As described in Chapter 2, the *division of labor*, in which difficult work is broken into smaller tasks, enables organized groups of people to accomplish tasks that would otherwise be beyond their physical or mental capacities as individuals.

When utilized effectively, the division of labor can lead to the creation of jobs that contribute to satisfaction, success, and significant competitive advantage. Sometimes, however, it leads to the creation of jobs that are monotonous and unchallenging due to oversimplification and the inclusion of too much routine. Why do managers design jobs that are so unappealing? What do they expect to gain by simplifying work so drastically? What can be done to counteract the negative effects of oversimplified, routinized tasks—outcomes like detached daydreaming, social alienation, and careless work? Can oversimplification be avoided completely?

This chapter seeks answers to these questions by examining theories and methods of **work design**, the formal process of dividing an organization's total stock of work into jobs and tasks that its members can perform. The chapter begins by describing one approach to work design, the *efficiency perspective*, that originated in the work on scientific management described in Chapter 2. Today this approach is widely used to economize on the costs of production activities. Next, the chapter turns to the *motivational perspective*, an approach that arose largely in reaction to problems with the efficiency perspective. This perspective, which is based on ideas about human motivation and satisfaction like those discussed in Chapters 5 and 6, highlights the importance of designing jobs that encourage employee growth and fulfillment. The chapter then describes a third approach, the *quality perspective*, which combines key elements of the efficiency and motivational perspectives. Growing out of the total quality management movement, this perspective focuses primarily on improving innovation and quality through the use of self-managed teams, advanced production technologies, and rigorous process management.

## The Efficiency Perspective

To achieve *efficiency*, companies minimize the resources consumed in providing a product or service. Thus, the **efficiency perspective** on work design is concerned with creating jobs that conserve time, human energy, raw materials, and other productive resources. It is the



foundation of the field of **industrial engineering**, which focuses on maximizing the efficiency of the methods, facilities, and materials used to produce commercial products. Methods engineering and work measurement are two areas of industrial engineering that have had especially noticeable effects on the division of labor in modern organizations.

### Methods Engineering

**Methods engineering** is an area of industrial engineering that originated in Frederick Winslow Taylor's work on scientific management (described in Chapter 2). It attempts to improve the methods used to perform work by incorporating two related endeavors—process engineering and human factors engineering.

**Process engineering** assesses the sequence of tasks required to produce a particular product or service and analyzes the way those tasks fit together into an integrated job. It also examines tasks to see which should be performed by people and which should be carried out by machines, trying to determine how workers can perform their jobs most efficiently.

Process engineers study the product or service to be produced and decide what role, if any, humans should play in its production. They also determine whether some employees should act as managers, directing and controlling the flow of work, and they differentiate the resulting managerial jobs from those of nonmanagerial workers. Process engineers specify the procedures for employees to follow, the equipment they should use, and the physical layout of offices, workstations, and materials-storage facilities.

In contrast to the process engineer's focus on improving work processes, experts in **human factors engineering** (sometimes called **ergonomics**) design machines and work environments so that they better match human capacities and limitations. Table 7.1 summarizes some of the most important areas of study of human factors engineering.

When people make mistakes at work, human factors engineers investigate whether the equipment being used is partially to blame for these mistakes. Are mistakes made when workers use certain kinds of equipment but not others? Can equipment be redesigned so as to minimize or even eliminate human error? In most cases, the effects of human fallibility and carelessness can be substantially decreased by minimizing the error-provoking features of jobs and equipment. For example, shape-coded controls like those shown in Figure 7.1 can be

**Table 7.1** Human Factors Engineering

<i>Area of study</i>	<i>Examples</i>
Physical aspects of the user–machine interface	Size, shape, color, texture, and method of operation of controls for cars, home appliances, and industrial and commercial equipment.
Cognitive aspects of the user–machine interface	Human understanding of instructions and other information. Style of information exchange between computer and user.
Workplace design and workspace layout	Layout of offices, factories, kitchens, and other places where people work. Design of relationships between furniture and equipment and between different equipment components.
Physical environment	Effects of climate, noise and vibration, illumination, and chemical or biological contaminants on human performance and health.

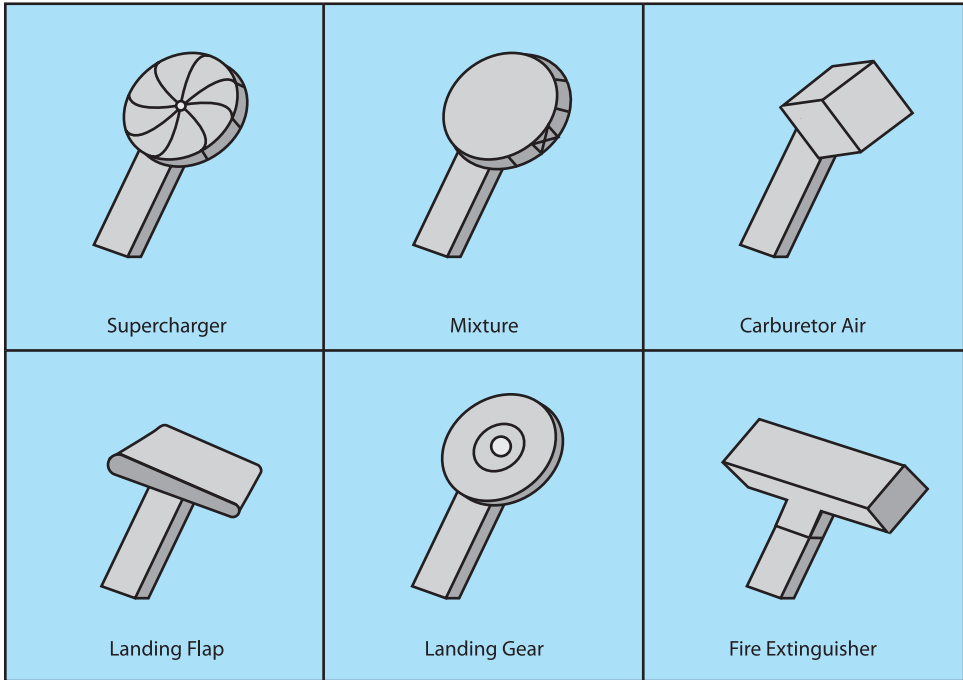


Figure 7.1 Shape-Coding to Reduce Flying Errors

used to reduce aircraft accidents caused when pilots activate the wrong control. To help pilots differentiate among control levers without looking at them, two general rules were followed during the design process: (1) the shape of a control should suggest its purpose, and (2) the shape should be distinguishable even when gloves are worn.<sup>1</sup>

### Work Measurement: Motion and Time Studies

Besides designing job methods, industrial engineers sometimes examine the motions and time required to complete each job. Although such work can be traced to Taylor's work on scientific management, it is more directly the product of research by Frank and Lillian Gilbreth, who set out to find the "one best way" to do any job. In the course of this pursuit, the Gilbreths developed motion study, a procedure that reduces jobs to their most basic movements. As noted in Chapter 2, each of these basic movements is called a *therblig* (a near reversal of the name *Gilbreth*) and consists of motions such as "search," "grasp," and "assemble." The Gilbreths also developed procedures to specify in advance the time required for each of the movements needed to perform a job. These procedures gave rise to **work measurement**, an area of industrial engineering concerned with measuring the amount of work accomplished and developing standards for performing work of an acceptable quantity and quality. Work measurement includes both micromotion analysis and time-study procedures.

In **micromotion analysis**, industrial engineers analyze the hand and body movements required to do a job. This technique is a direct descendant of the motion-study methods devised by the Gilbreths, whose therbligs continue to be used in current micromotion procedures. Industrial engineers usually conduct micromotion analysis by using a slow-speed

film or videotape of a person performing his or her job. They then analyze the movements performed in the task and try to improve efficiency by means of principles such as the following:

1. Try to have both hands doing the same thing at the same time or to balance the work of the two hands.
2. Avoid using the hands simply for holding. Use specialized jigs, vises, or clamps instead.
3. Keep all work inside a work area bounded by the worker's reach.
4. Relieve the hands of work wherever possible.
5. Eliminate as many therbligs or as much of a therblig as possible, and combine therbligs when possible.
6. Arrange therbligs in the most convenient order. Each therblig should flow smoothly into the next.
7. Standardize the method of performing the job in the manner that promotes the quickest learning.<sup>2</sup>

As is apparent from these principles, jobs designed by means of micromotion analysis are characterized by economy of motion.

*Time-study techniques* are used to measure the time actually consumed by job performance; they are also sometimes employed to specify the time that a particular job should take to complete. In **stopwatch time analysis**, an analyst uses a stopwatch (or microchronometer) to time the sequence of motions needed to complete a job. In **standard time analysis**, the analyst matches the results of micromotion analysis with standard time charts to determine the average time that should be required to perform a job. When combined with micromotion analyses, the results of either type of time analysis can be used to create descriptions that identify the therblig motions required to perform a job and the length of time that the job should take to complete.

### **Evaluating Industrial Engineering and the Efficiency Perspective**

Consistent with the efficiency perspective that underlies them, all industrial engineering methods attempt to enhance productivity by simplifying jobs. Often, use of these methods can improve productivity dramatically.<sup>3</sup> There is, however, a danger that simplification will be carried too far, leading to the creation of jobs that are oversimplified and lacking in challenge.

Workers performing oversimplified, routine jobs often become bored, resentful, and dissatisfied—attitudes that contribute to problems with workforce absenteeism and turnover. Employees who choose to remain on their jobs may slow down their work pace or resort to sabotage to compensate for the lack of challenge and interest in their work. Performance quantity and quality are likely to suffer as a consequence.

Oversimplification can also have negative health consequences. According to U.S. government sources, far more than 50 percent of all workplace illnesses are attributable to the adverse effects of repetitive stress caused by doing routine jobs again and again. Workers' compensation claims and other expenses related to such injuries cost U.S. employers as much as \$20 billion per year, according to estimates made by insurer Aetna Life and Casualty. To deal with this problem, businesses such as the Chrysler Corporation have begun to rotate workers among tasks to break up repetition over the course of each working day. Chrysler has also redesigned many jobs and developed special tools to reduce or eliminate repetitive stress.<sup>4</sup> In summary, *the simplification intended to enhance the efficiency of work processes may actually reduce that efficiency, if carried to an extreme.*

## The Motivational Perspective

What can be done to counteract the effects of oversimplification, or to make sure that jobs are not oversimplified to begin with? The answer to this question, offered initially by Lillian Gilbreth, is that *jobs should be designed in such a way that performing them creates feelings of fulfillment and satisfaction in their holders.*<sup>5</sup> This idea forms the central tenet of the **motivational perspective** on work design, which suggests that fitting the characteristics of jobs to the needs and interests of the people who perform them provides the opportunity for satisfaction at work.<sup>6</sup> Table 7.2 contrasts this approach with the efficiency perspective discussed in the previous section. Methods of work design that incorporate various elements of the motivational perspective include horizontal job enlargement, vertical job enrichment, comprehensive job enrichment, and sociotechnical enrichment. Some of these approaches are more successful than others in stimulating motivation and feelings of fulfillment and satisfaction, as discussed in the remainder of this section.

### Horizontal Job Enlargement

To counteract oversimplification, managers sometimes attempt to boost the complexity of work by increasing the number of task activities entailed in a job. This approach is based on the idea that increasing **job range**, or the number of tasks that a jobholder performs, will reduce the repetitive nature of the job and thus eliminate worker boredom.<sup>7</sup> Increasing job

**Table 7.2** Two Perspectives on Work Design

<i>Efficiency perspective</i>	<i>Motivational perspective</i>
Tasks are shaped mainly by technology and organizational needs.	Tasks are shaped at least partly by workers' personal needs.
Tasks are repetitive and narrow.	Tasks are varied and complex.
Tasks require little or no skill and are easy to learn and perform.	Tasks require well-developed skills and are difficult to learn and perform.
The management and performance of work are separated into different jobs.	The management and performance of work are merged in the same jobs.
It is assumed that only one best way to do each job exists.	It is assumed that each job can be performed in several ways.
Tools and methods are developed by staff specialists.	Tools and methods are often developed by the people who use them.
Workers are an extension of their equipment and perform according to its requirements.	Workers use equipment but are not regulated by it.
The pace of work is often set by a machine.	The pace of work is set by people rather than machines.
Extrinsic rewards (incentive wages) are used to motivate performance.	Intrinsic rewards (task achievements) are used along with extrinsic rewards to motivate performance.
Social interaction is limited or discouraged.	Social interaction is encouraged and, in some cases, required.
Efficiency and productivity are the ultimate goals of work design.	Satisfaction and fulfillment are important goals of work design.

range in this manner is called **horizontal job enlargement**—so named because the job is created out of tasks from the same horizontal “slice” of an organization’s hierarchy.

Some horizontal job enlargement programs rely on **job extension**, an approach in which several simplified jobs are combined to form a single new job. For example, an insurance clerk’s job that consists solely of proofreading might be extended by adding filing and telephone-answering tasks to it. Similarly the job of a welder on an automotive assembly line might be extended by adding other assembly operations to it.

Organizations as diverse as Maytag, AT&T, and the U.S. Civil Service have all implemented job extension programs. When a number of simple, readily mastered tasks are combined, however, workers tend to view job extension as giving them more of the same routine, boring work to do. For this reason, although initial efforts seemed promising, most research has suggested that job extension rarely succeeds in reversing oversimplification to the degree necessary to strengthen employee motivation and satisfaction.<sup>8</sup>

In **job rotation**, workers switch jobs in a structured, predefined manner. Rotation of this sort creates horizontal enlargement without combining or otherwise redesigning a firm’s jobs. For instance, a supermarket employee might run a checkout lane for a specified period of time and then, after switching jobs with another employee, restock shelves for another set period of time. As workers rotate, they perform a wider variety of tasks than they would if limited to a single job. As with job extension, however, critics have observed that job rotation often achieves little more than having people perform several boring, routine jobs. Thus, although companies such as Ford Motor Company and Western Electric have tried job rotation, it has generally failed to improve worker motivation or satisfaction (although it can help solve RSI and similar health problems attributable to repetitive work).<sup>9</sup>

### **Vertical Job Enrichment**

The failure of horizontal job enlargement to counteract the undesirable effects of oversimplification has led managers to try a variety of alternative approaches. Many such trials involve attempts to increase **job depth**—that is, the amount of discretion a jobholder has to choose his or her job activities and outcomes. This approach, called **vertical job enrichment**, is based on the work of Frederick Herzberg, an industrial psychologist who studied the sources of employee satisfaction and dissatisfaction at work.<sup>10</sup>

Herzberg, who began his research in the mid-1950s, began by interviewing 200 engineers and accountants in nine companies, asking them to describe incidents at work that made them feel “exceptionally good” or “exceptionally bad” about their jobs. From these interviews, Herzberg concluded that satisfaction (feeling good) and dissatisfaction (feeling bad) should be considered independent concepts, rather than opposite extremes on a single continuum as traditional views had held. This approach suggests that a person might feel more satisfied with his or her job without feeling less dissatisfied, more dissatisfied without feeling less satisfied, and so forth.

As he dug further into his interview data, Herzberg also found that certain characteristics of the work situation seemed to influence employee satisfaction, whereas other characteristics appeared to affect employee dissatisfaction. **Motivator factors**, such as achievement or recognition, increased satisfaction. Their absence produced a lack of satisfaction but not active dissatisfaction. In contrast, **hygiene factors**, such as company policy or employees’ relationships with their supervisors, usually led to serious dissatisfaction and rarely contributed to a gain in satisfaction.

Armed with this distinction, Herzberg then noticed that only the motivator factors identified in his research seemed able to increase the incentive to work. Hygiene factors, he

said, could help maintain motivation but would more often contribute to a decrease in motivation. As indicated in Figure 7.2, many of Herzberg’s hygiene factors are the very same work characteristics emphasized by the efficiency perspective on work design. In fact, Herzberg contended that following the principles advocated by Taylor, the Gilbreths, and later specialists in industrial engineering would create oversimplified jobs that could only dissatisfy and demotivate workers. Consequently, he suggested that managers should pay less attention to issues such as working conditions and salary and instead design jobs that incorporated opportunities for growth, achievement, and recognition.

Over the years, many critics have attacked Herzberg’s ideas.<sup>11</sup> Among the most serious criticisms are the following:

1. The *critical-incident technique* that Herzberg used, in which he asked people to recall earlier feelings and experiences, is a questionable research method subject to errors in perception or memory and to subconscious biases. Its use leaves the validity of his conclusions open to question.
2. All of Herzberg’s interviewees—engineers and accountants—were male members of professional, white-collar occupational groups (few women were engineers or accountants in

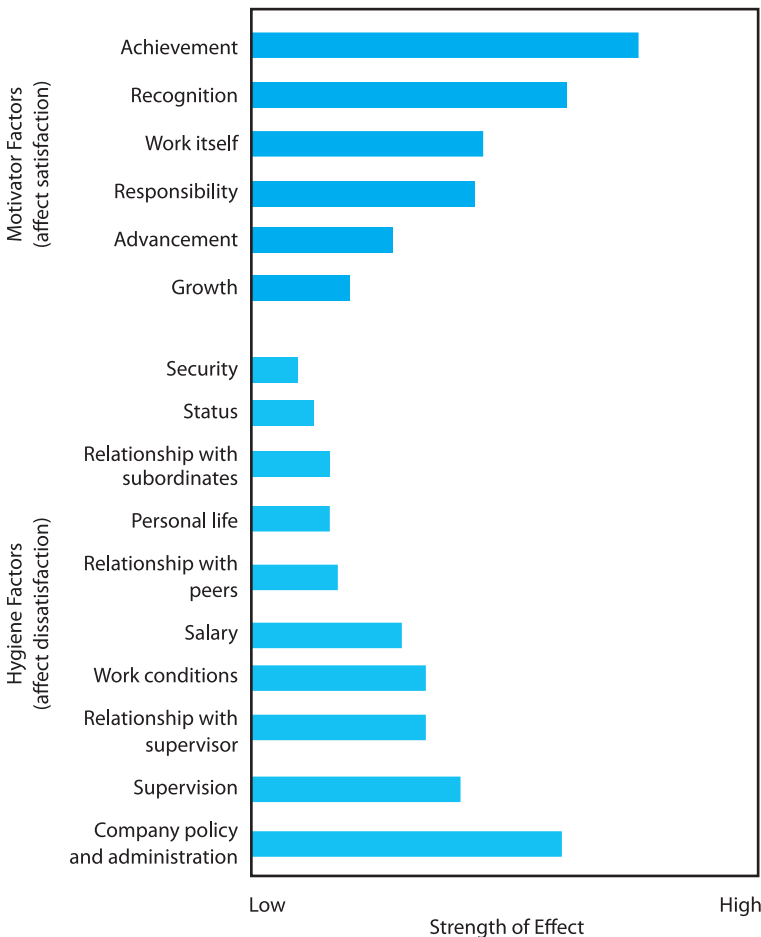


Figure 7.2 Herzberg’s Motivator Factors and Hygiene Factors

- Herzberg's day). Women, minorities, and members of other occupational groups, such as salespeople or industrial laborers, might have answered Herzberg's questions differently.
3. Other studies have failed to replicate Herzberg's results. As will be discussed in Chapter 16, which covers research methods, such failure casts doubt on the merits of research findings.
  4. Work design programs based on Herzberg's model almost always fail to stimulate workforce satisfaction of lasting significance.

Because of these questions about its validity, Herzberg's two-factor theory is not a useful guide for managerial actions.<sup>12</sup> Nonetheless, it remains widely known among managers and continues to stimulate interest in questions of motivation, satisfaction, and work design. In addition, it has influenced more recent ideas about work design by highlighting the importance of designing jobs that satisfy *higher-order* desires for growth, achievement, and recognition.

### Comprehensive Job Enrichment

Although neither horizontal job enlargement nor vertical job enrichment can counteract oversimplification when implemented separately, **comprehensive job enrichment** programs that combine both horizontal and vertical improvements are usually more successful in stimulating motivation and satisfaction. Many such programs are based on the model of work design developed by J. Richard Hackman and Greg Oldham, overviewed in Figure 7.3.<sup>13</sup>

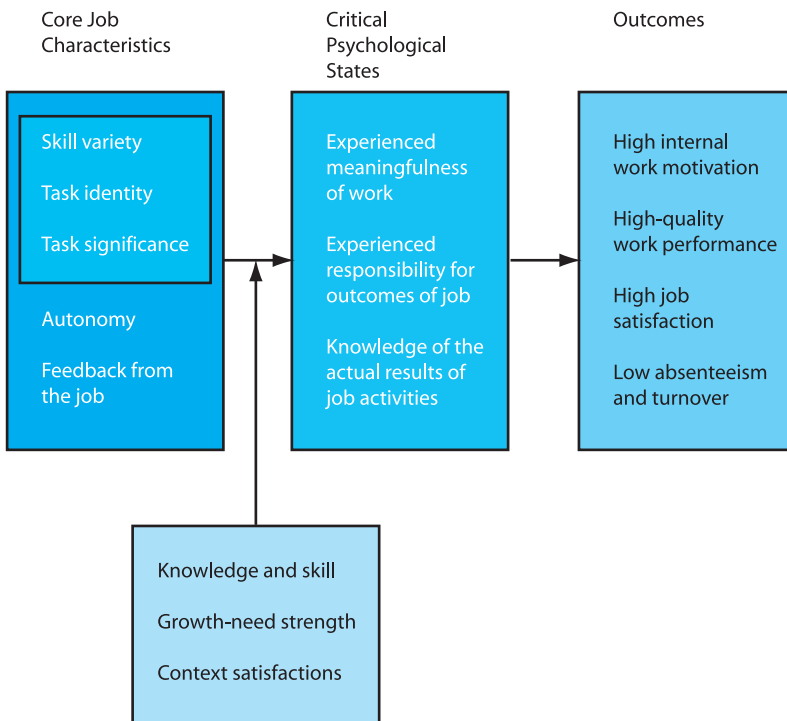


Figure 7.3 Elements of the Hackman–Oldham Job Characteristics Model

### The Hackman–Oldham Model

According to Hackman and Oldham, jobs that are likely to motivate performance and contribute to employee satisfaction exhibit the following five **core job characteristics**:

1. *Skill variety*: the degree to which a jobholder must carry out a variety of activities and use a number of different personal skills in performing the job.
2. *Task identity*: the degree to which performing a job results in the completion of a whole and identifiable piece of work and a visible outcome that can be recognized as the result of personal performance.
3. *Task significance*: the degree to which a job has a significant effect on the lives of other people, whether those people are co-workers in the same firm or other individuals in the surrounding environment.
4. *Autonomy*: the degree to which the jobholder has the freedom, independence, and discretion necessary to schedule work and to decide which procedures to use in carrying out that work.
5. *Feedback*: the degree to which performing the activities required by the job provides the worker with direct and clear information about the effectiveness of his or her performance.

In turn, these five core job characteristics influence the extent to which employees experience three **critical psychological states**, or personal, internal reactions to their jobs. The first state, *experienced meaningfulness of work*, refers to the degree to which a worker sees his or her job as having an outcome that is useful and valuable to the worker, the company, and the surrounding environment. The second psychological state, *experienced responsibility for work outcomes*, concerns the degree to which the worker feels personally accountable and responsible for the results of work. The third state, *knowledge of results*, reflects the degree to which the worker maintains an awareness of the effectiveness of his or her work.<sup>14</sup>

Next, each job characteristic influences a particular psychological state. Specifically, skill variety, task identity, and task significance affect the experienced meaningfulness of work. Thus jobholders should feel that their jobs are meaningful if they must use a variety of activities and skills to produce an identifiable piece of work that influences the lives of others. Autonomy, on the other hand, influences the jobholder's experienced responsibility for work outcomes. Consequently, workers who have the discretion to determine their work procedures and outcomes should feel responsible for the results of that work. Finally, feedback determines whether a worker will have knowledge of the results of his or her work. Through information about performance effectiveness that comes from the job itself, the jobholder can maintain an awareness of how effectively he or she is performing.

According to the Hackman–Oldham model, if workers experience all three states simultaneously, four kinds of work and personal outcomes may result. First, workers will tend to view their jobs as interesting, challenging, and important, and they may be motivated to perform them simply because they are so stimulating, challenging, and enjoyable. *High internal work motivation*, or being “turned on” to job performance by its personal consequences, is therefore one possible outcome. Second, experiencing the three critical psychological states and the internal, or intrinsic, motivation they arouse can encourage *high-quality work performance* (and, in some instances, a higher quantity of production as well).<sup>15</sup> Third, workers who experience the three psychological states do so because their work provides them with opportunities for personal learning, growth, and development. As discussed in Chapter 6, these kinds of experiences generally promote *high satisfaction with*



*work*. Fourth, work that stimulates all three psychological states also tends to lead to *lower absenteeism and turnover*.

The Hackman–Oldham model proposes that several individual differences determine whether the core job characteristics will actually trigger the critical psychological states, leading to the four outcomes just described. The first of these differences is the worker’s *knowledge and skill*. To succeed on a job characterized by high levels of the five core job characteristics, a worker must have the knowledge and skill required to perform the job successfully. People who cannot perform a job because they lack the necessary knowledge or skill will merely feel frustrated by their failure, not encouraged. The motivational aims of comprehensive job enrichment will thus be thwarted.

*Growth-need strength*, or the strength of a worker’s need for personal growth, is a second individual difference that moderates the effects of the Hackman–Oldham model. Workers who have strong growth needs are attracted to enriched work because it offers the opportunity for growth. In contrast, workers with weak growth needs are likely to feel overburdened by the opportunities offered them. As a consequence, they will try to avoid enriched work and will not derive personal benefit if required to perform it.

Finally, *context satisfactions* can influence the Hackman–Oldham model’s applicability. Hackman and Oldham identified several context satisfactions—satisfaction with pay, with job security, with co-workers, and with supervisors. Workers who feel exploited and dissatisfied because they are poorly paid, feel insecure about their jobs, or have abusive co-workers or unfair supervision are likely to view job enrichment as just one more type of exploitation. Context dissatisfaction can thus negate the expected benefits of comprehensive job enrichment.

### *Implementation*

To put their model to use, Hackman and Oldham developed the **Job Diagnostic Survey (JDS)**. This questionnaire measures workers’ perceptions of the five core job characteristics, the three critical psychological states, and certain moderating factors.

The deficiencies identified by a JDS analysis of a particular job can be corrected in several ways. To enhance skill variety and task identity, oversimplified jobs can be *combined* to form enlarged modules of work. For example, the production of a toaster could be redesigned so that the entire appliance is constructed by a single employee working alone rather than by a dozen or more people working on an assembly line. *Natural units of work* can be created by clustering similar tasks into logical or inherently meaningful groups. For instance, a data-entry clerk who formerly selected work orders randomly from a stack might be given sole responsibility for the work orders of an entire department or division. This intervention is intended to strengthen both task identity and task significance for the clerk.

To increase task variety, autonomy, and feedback, a firm can give workers the responsibility for *establishing and managing client relationships*. At John Deere & Company, for example, assembly-line workers take stints as traveling salespeople, getting to know their customers’ needs and complaints.<sup>16</sup> To increase autonomy, managerial duties can be designed into a particular job through *vertical loading*. Finally, to increase feedback, *feedback channels* can be opened by adding to a job such things as quality-control responsibilities and computerized feedback mechanisms.

### Sociotechnical Enrichment

The Hackman–Oldham model focuses on designing individualized units of work, each performed by a single employee. Therefore, it is not appropriate for jobs that must be performed by closely interacting groups of workers. To counteract the negative effects of oversimplified *group work*, managers can instead use a **sociotechnical enrichment** approach.

Sociotechnical enrichment originated in the early 1950s, when researchers from England's Tavistock Institute set out to correct faults in the processes used to mine coal in Great Britain.<sup>17</sup> Historically, coal had been excavated by teams of miners working closely with each other to pool efforts, coordinate activities, and cope with the physical threats of mining. With the advent of powered coal-digging equipment in the 1930s and 1940s, however, coal mining changed drastically. Teams were split up, and miners often found themselves working alone along the long walls of exposed coal created by the equipment. Mining—which is normally a hazardous, physically demanding occupation—grew even more unbearable owing to the changes stimulated by the new technology. Miners expressed their dissatisfaction with these circumstances through disobedience, absenteeism, and occasional violence.

The Tavistock researchers soon concluded that the roots of the miners' dissatisfaction lay in the loss of the social interaction that mining teams had provided, which had made the dangerous, demanding job of mining more tolerable. According to the researchers, the technology had been allowed to supersede important social factors. Performance in the mine could be improved only by redressing this balance. Indeed, after small teams were formed to operate and provide support for clusters of powered equipment, production rose substantially.

This finding, along with similar results found at other research sites, led the Tavistock researchers to make the general suggestion that workforce productivity could be hurt when either social or technical factors alone were allowed to shape work processes. They further suggested that work designs that sought to balance social and technological factors—*sociotechnical designs*—would encourage both performance and satisfaction in the workplace.

Stated differently, researchers suggested that employees should work in groups that allowed them to talk with each other about their work as they performed their duties. These work groups should include the people whose frequent interaction is required by the production technology being used. For instance, salespeople, register clerks, and stock clerks, who must often interact with each other to serve customers in a department store, should be grouped together to facilitate communication about work. Salespeople and clerks from other departments should not be included in the group, because they do not share job-related interdependencies with the group's members.

In the course of conducting their studies, the Tavistock sociotechnical researchers identified the following work characteristics as critical to worker motivation and satisfaction:

1. The content of each job must be reasonably demanding or challenging and provide some variety, although not necessarily novelty.
2. Performing the job must have perceivable, desirable consequences. Workers should be able to identify the products of their efforts.
3. Workers should be able to see how the lives of other people are affected by the production processes they use and the things they produce.
4. Workers must have decision-making authority in some areas.
5. Workers must be able to learn from the job and go on learning. This requirement implies having appropriate performance standards and adequate feedback.

6. Workers need the opportunity to give and receive help and to have their work be recognized by others in the workplace.<sup>18</sup>

This list of characteristics was developed independently of the work of Hackman and Oldham, as the Tavistock group did its research mainly in England and Norway and Hackman and Oldham worked only in the United States. Nonetheless, items 1 through 5 of the Tavistock list are similar to the five core job characteristics of the Hackman–Oldham model. Only item 6 differs from the latter model, and it reflects the emphasis placed by sociotechnical enrichment on the importance of cooperating and satisfying social needs at work.

Contemporary sociotechnical designs normally create **semiautonomous groups**. These groups must respond to the management direction needed to ensure adherence to organizational policies, but they are otherwise responsible for managing group activities. Within each such group,

[i]ndividuals must move about within the group spontaneously and without being ordered to do so, because it is necessary to the efficient functioning of the [group]. . . . If we observe the group in action, we will see movements of individuals between different jobs. When an especially heavy load materializes at one work station and another is clear for the moment, we will see the person at the latter spontaneously move to help out at the former. . . . It is a natural and continuous give and take within a group of people, the object being to attain an established production target. . . . The group members are not merely carrying out a certain number of tasks. They are also working together, on a continuing basis, to coordinate different tasks, bearing responsibility, and taking whatever measures are necessary to cope with the work of the entire unit.<sup>19</sup>

As they work together in this manner, the members of a semiautonomous group are able to do the following:

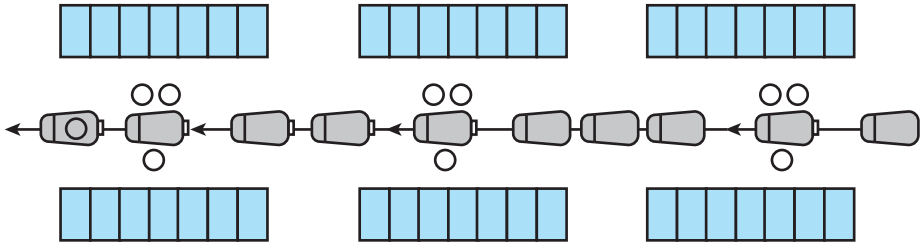
1. rotate in and out of tasks to enhance skill variety
2. work together on a group product that is a whole, identifiable piece of work
3. influence the lives of other members of the group and the lives of those who consume the group's output
4. decide as a group who will belong to the group and what tasks the group members will perform
5. obtain feedback from group members about task performance
6. count on the help and support of other group members if it is needed

When it proceeds in this manner, the work of semiautonomous groups is rich in the psychological requirements identified by sociotechnical researchers as enhancing workforce motivation and satisfaction.

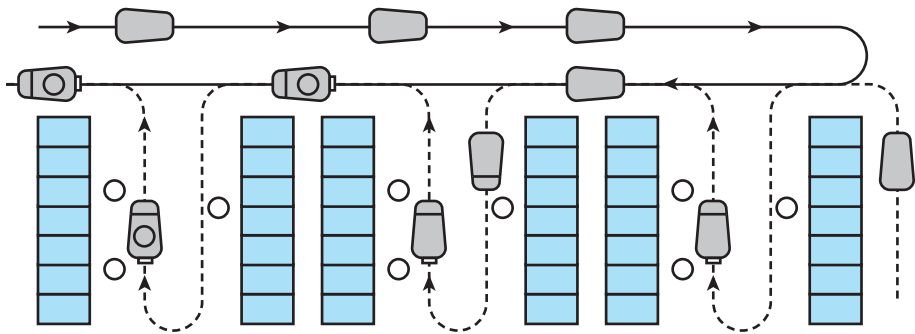
### *Implementation*

Figure 7.4 contrasts a traditional assembly line with semiautonomous groups. As shown in the figure, the decision to adopt sociotechnical design principles has important implications for shop floor operations. In both panels of the figure, workers are assembling automotive engines. In the upper panel, each worker performs a simplified job that consists of taking a part from a storage bin and attaching it to a partially completed engine as it moves along a

## Traditional Assembly Line



## Semiautonomous Work Groups



## Legend

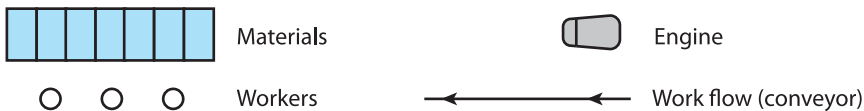


Figure 7.4 Comparison of an Assembly Line and Semiautonomous Groups

conveyor. In the lower panel, workers are clustered into semiautonomous groups, each of which removes a bare engine block from a conveyor loop, assembles a complete engine from parts in surrounding storage bins, and returns the finished engine to the conveyor loop for transportation to other assembly operations. As suggested by this example, sociotechnical work designs typically eliminate traditional assembly-line operations.

### Evaluating the Motivational Perspective

Consistent with the motivational perspective that underlies them, all enlargement and enrichment techniques are aimed at designing jobs that satisfy the needs and interests of their holders. As noted earlier, methods that consist solely of horizontal job enlargement or vertical job enrichment have largely failed to achieve this goal. Methods of work design that incorporate *both* horizontal enlargement and vertical enrichment, however, have proven more effective in stimulating workforce motivation and satisfaction in a wide variety of situations.<sup>20</sup>

Some doubts have been raised about various elements of the Hackman–Oldham model. For example, studies have sometimes failed to verify the existence of the five distinct job

characteristics identified in the model.<sup>21</sup> It is also unclear whether JDS questionnaire items measure objective, stable job characteristics or subjective, changing worker opinions.<sup>22</sup> Some researchers have even questioned whether job characteristics like those identified by Hackman and Oldham truly influence motivation and satisfaction. They suggest that employees' feelings about themselves and their work might instead be affected more profoundly by the opinions of other people in the surrounding social context.<sup>23</sup> This idea will be considered further in Chapter 14, when we discuss *social information processing* and organizational culture. Finally, some disagreement exists as to whether the moderators identified by Hackman and Oldham actually influence the model's applicability.<sup>24</sup>

Nonetheless, the Hackman–Oldham model has served as the basis of successful work design programs implemented at many well-respected companies, including Texas Instruments, AT&T, Motorola, and Xerox. Such programs are not without their drawbacks. In particular, they are usually incompatible with assembly-line production processes. To enrich jobs using the Hackman–Oldham approach, a firm must almost always abandon the sort of simplified, repetitive tasks that serve as the foundation of assembly lines. Consequently, companies with substantial investments in modernized assembly lines are often reluctant to try Hackman–Oldham enrichment. In addition, 5 to 15 percent of the workforce typically lacks the skills, growth needs, or context satisfactions needed to realize the benefits of such work; those workers are likely to be “overstretched” by enriched work. Therefore, a cluster of unenriched jobs must be maintained if the firm wants to avoid displacing a significant number of its employees.

The sociotechnical enrichment approach was first implemented in Europe, where it influenced the design of jobs in firms such as Norsk Hydro, Volvo, Saab-Scania, and the Orrefors Glass Works. Since then, U.S. companies including Xerox, Cummins Engine, IBM, Polaroid, and General Electric have also experimented with sociotechnical work design, and investigation has shown that this approach yields virtually the same outcomes stimulated by the Hackman–Oldham method.<sup>25</sup> Sociotechnical work designs do not always improve productivity or reduce absenteeism and turnover, but they do strengthen motivation, satisfaction, and similar workplace attitudes.<sup>26</sup> In addition, as is true for programs based on the Hackman–Oldham model, experience suggests that a small but significant number of workers are likely to resist sociotechnical enrichment. Consequently, either a few jobs must be left unchanged or managers must be prepared to deal with the overstretching problem.

## The Quality Perspective

Within the last three decades, a third perspective on work design has emerged as researchers and managers have sought new ways to improve the quality of goods and services produced in North America. Founders of the **quality perspective** include W. Edwards Deming, Philip B. Crosby, and Joseph M. Juran, three U.S. quality experts who inspired widespread adoption of an approach known as Total Quality Management (TQM).<sup>27</sup> TQM is guided by an overarching emphasis on making *continuous* improvements in quality throughout the process of planning objectives, organizing work, designing products, undertaking production, and monitoring results.<sup>28</sup>

Reflecting this emphasis, advocates of the quality perspective recommend the use of self-management, teamwork, and technology to stimulate innovation and flexibility, so that companies can produce high-quality products and respond effectively to changing customer demands.<sup>29</sup> As part of this perspective, quality circles, self-managed teams, automation and robotics, and process management have been introduced throughout North America and have significantly affected the way work is designed.

## Quality Circles

**Quality circles** (QCs) are small groups of employees, ranging in size from roughly 3 to 30 members, who meet on company time to identify and resolve job-related problems. Although usually thought of as a Japanese management technique, QCs were actually invented in the United States and exported to Japan by Deming and Juran during the Allied occupation that followed World War II.<sup>30</sup> In North America, companies such as Westinghouse, Eastman Kodak, Procter & Gamble, General Motors, Ford, and DaimlerChrysler have implemented QCs to achieve the following goals:

1. reduce assembly errors and enhance product quality
2. inspire more effective teamwork and cooperation in everyday work groups
3. promote a greater sense of job involvement and commitment
4. increase employee motivation
5. create greater decision-making capacity
6. substitute problem prevention for problem solving
7. improve communication in and between work groups
8. develop harmonious relations between management and employees
9. promote leadership development among nonmanagerial employees<sup>31</sup>

Ordinarily, QC membership is voluntary and remains stable over time. The amount of time spent in QC activities can range from one hour per month to a few hours every week. Topics of discussion can include quality control, cost reduction, improvement of production techniques, production planning, and even long-term product design.<sup>32</sup> Over the course of many meetings, the activities of a typical QC proceed through a series of steps:

1. Members of the QC raise issues about their work and workplace in a group discussion coordinated by their supervisor or a specially trained facilitator. Often, the facilitator is an internal change agent with expertise in micro organization development.
2. QC members examine these concerns and look for ways to collapse or integrate them into specific projects. For instance, concerns about production speed and raw-material quality may be grouped together in a production methods project. Concerns about workplace safety and worker health may be combined into a work environment project.
3. Members perform initial analyses of their QC's projects using various group decision-making techniques and tools, including data gathering, graphs, checklists, or charts.
4. QC members reach consensus decisions about the feasibility and importance of different projects, deciding which ones to abandon and which ones to pursue.
5. Representatives from the QC make a presentation or recommendation to management that summarizes the work of their group.
6. Management reviews the recommendation and makes a decision. Often, the decision is that QC members will have the opportunity to implement and assess their own recommendations.<sup>33</sup>

Many companies that suffer the negative consequences of job oversimplification are unable or unwilling to modify production equipment or methods to the extent required by the Hackman–Oldham and sociotechnical models. In some of these firms, managers have attempted to use QCs to counteract the negative effects of overzealous job specialization and simplification. QCs fight oversimplification by giving employees the opportunity to participate in the management of their jobs, and they do not require the modification of existing

work technologies. For example, employees who work on an assembly line for 39 hours each week might meet as a QC group during the 40th hour to evaluate the assembly line's performance and prepare for the following week's work. They might also meet in an extended session on a monthly basis to discuss more complicated issues and resolve more difficult problems.

Such monthly sessions offer an opportunity for QC members to engage in more managerial activity, group autonomy, and information exchange than allowed by the regular QC meetings. To the extent that QC meetings focus workers' attention on the outputs of the entire assembly line, they may also reinforce task identity and task significance.

### Self-Managing Teams

**Self-managing teams** take the general orientation of QCs a step further, by grouping employees together into *permanent* teams and empowering each team with the authority to manage itself.<sup>34</sup> Such teams resemble the semiautonomous groups investigated in Tavistock's sociotechnical research, except that self-managing teams have greater autonomy.<sup>35</sup> This difference is attributable to the recent emergence of computer networks, which provide self-managing groups with the ability to interact with one another and exchange information about company goals, job assignments, and ongoing production progress without the assistance of an intervening hierarchy of managers.<sup>36</sup>

Among the management responsibilities allotted to each self-managing team is the duty of continually assessing the work of the team and redesigning the jobs of the team's members. To enable teams to fulfill this responsibility, team members receive training in how to design jobs and assess performance quality and efficiency. Techniques taught to team members include many of the industrial engineering procedures described earlier in this chapter.

For example, the members of self-managing teams might analyze each of the team's jobs by performing stopwatch time studies, micromotion analyses, ergonomic equipment assessments, or similar investigations, all in an effort to improve each job's efficiency. Inefficient jobs are either eliminated or redesigned by the team. The newly designed jobs are then retested, assessed, and, if successful, adopted throughout the plant.

### Automation and Robotics

Automation is a third approach available to managers who seek to improve quality. Like other TQM approaches, it also has implications for the design of jobs. For many years, automation in the form of assembly-line manufacturing created some of the most oversimplified and demotivating jobs in industry. Today, however, with the invention of automated technologies that can totally replace people in production processes, automation is sometimes used instead to eliminate repetitive, physically demanding, mistake-prone work.<sup>37</sup> Such jobs frequently utilize **industrial robots**, or machines that can be programmed to repeat the same sequence of movements over and over again with extreme precision. Robots have been introduced throughout the automotive industry, taking over various painting and parts installation jobs. Robots have also moved from the factory floor to the operating room, performing such functions as precision hip replacement and cancerous tumor radiation.<sup>38</sup>

Robots are not without their flaws. At General Motors, for example, employees regularly tell stories of one robot busily smashing the windshields installed by another robot, or a group of robots painting each other instead of the cars passing by them on the assembly line. Proper programming is obviously a critical aspect of introducing robots into the workplace,<sup>39</sup> and careful planning, implementation, and adjustment are essential. In addition, experience has

shown that building a robot capable of performing anything more than the simplest of jobs is often cost-prohibitive. Consequently, the U.S. population of robots is far less than the hundreds of thousands once predicted. Nonetheless, robots provide an effective way to cope with many repetitive jobs that people do not want to or cannot perform well.<sup>40</sup>

Computer-integrated manufacturing in the form of *flexible manufacturing cells* is another type of automated technology introduced in the name of TQM, albeit one that focuses on adaptability rather than robotic repetitiveness. Products made in such cells include gear-boxes, cylinder heads, brake components, and similar machined-metal components used in the automotive, aviation, and construction-equipment industries. Companies throughout Europe, Japan, and North America are also experimenting with using flexible manufacturing cells to manufacture items out of sheet metal.<sup>41</sup>

Each flexible manufacturing cell consists of a collection of automated production machines that cut, shape, drill, and fasten metal components together. These machines are connected to each other by convertible conveyor grids that allow for quick rerouting to accommodate changes from one product to another. It is possible, for instance, to produce a small batch of automotive door locks and then switch over to fabricate and finish a separate batch of crankshafts for automotive air-conditioner compressors. The conversion simply involves turning some machines on and others off and then activating those conveyors that interconnect the machines that are in use—and operations of this sort are normally computer-controlled. When employed in this manner, the same collection of machines can manufacture a wide variety of products without substantial human involvement and without major alteration of the cell.<sup>42</sup>

Workers in a flexible manufacturing cell need never touch the product being manufactured, nor must they perform simple, repetitive production tasks. Instead, their jobs focus on the surveillance and decision making required to initialize different cell configurations and oversee equipment operations. Often, a cell's workforce forms a self-managing team to accommodate the sizable amount of mutual adjustment that must occur to manage occasional crises and keep production flowing smoothly. Under such circumstances, employees in a flexible manufacturing cell have enriched jobs that allow them to exercise expertise in teamwork, problem solving, and self-management.<sup>43</sup>

### Process Management

**Process management** is an approach intended to map, improve, and standardize organizational processes in order to reduce variance in the outcomes of those processes and increase organizational efficiency as a consequence.<sup>44</sup> In the 1980s the approach consisted of the TQM programs that gave rise to the quality perspective. In the decades since that time it has developed further into programs ranging from ISO 9000 certification to Six Sigma management. In the United States, extraordinary achievements are recognized each year by receipt of the Malcolm Baldrige National Quality Award, administered by the National Institute of Standards and Technology.

All programs within the area of process management share several common features. First, all focus on the standardization of work practices, to ensure quality and uniformity in the outcomes of those practices. Second, all encourage employees to apply a consistent set of problem-solving procedures (and most involve significant training in those procedures). Third, all involve rigorous measurement of outcomes in order to assess variance and trigger corrective action.<sup>45</sup> As is apparent from this description, process management thus encourages significant employee involvement in managerial processes, and at the same time it contributes to the standardization of work processes and employee behaviors.



### *Evaluating the Quality Perspective*

In many respects, the quality perspective represents a hybrid of the efficiency and motivational perspectives on work design. For instance, quality circles allow employees to enjoy at least modest satisfaction under conditions in which work processes are shaped mainly by concerns about productive efficiency. Self-managed teams enable their members to satisfy needs for social- and growth-oriented outcomes partly by requiring them to work together to apply many of the work design methods conforming to the efficiency perspective. Automation—perhaps the peak of mechanical efficiency—releases employees from jobs devoid of satisfying elements. Process management increases employee involvement in workplace decision making but focuses attention on efficient resource utilization.

What effects does this “middle ground” approach have on performance and satisfaction in the workplace? Evidence identifying the effects of QCs as a form of job enrichment is sketchy. The information that is available suggests that QCs have little effect on productivity but can enhance feelings of satisfaction and involvement significantly.<sup>46</sup> The magnitude of such effects is usually smaller than the results produced by job enrichment programs based on the Hackman–Oldham model or the Tavistock sociotechnical model. This discrepancy is understandable, however, because workers who participate in QCs must still perform unenriched jobs during most of their time spent at work.

Evidence concerning the job enrichment effects of self-managing groups is even more meager. Extrapolation from research on semiautonomous groups and QCs suggests that self-management should improve team members’ satisfaction and perhaps performance, and anecdotal accounts seem to support this contention.<sup>47</sup> Researchers have also noted that the quality standards developed and then observed in TQM teams can severely limit autonomy, which in turn reduces potential motivational gains, but workers who are able to alternate between adhering to existing standards and working to create new ones report significant satisfaction with their jobs.<sup>48</sup>

Research on the work design effects of automation is similarly lacking. At its core, automation represents a return to the efficiency perspective of industrial engineering. Some jobs resist enrichment, and it is more effective to turn them over to machines than to attempt to convert them into interesting, enjoyable work for people. Among both the old jobs that remain and the new ones that are created by adoption of innovation, the danger exists that human satisfaction may be ignored during the job design process. Nevertheless, research suggests that employees in flexible manufacturing cells do show signs of increased motivation, satisfaction, and improved performance if the tasks they perform provide greater autonomy than was available before the introduction of automation.<sup>49</sup>

Finally, a recent study of the effects of process management on workforce outcomes has shown that statistical process management practices can increase the motivation and satisfaction of workers who are involved in those practices as data interpreters and decision makers.<sup>50</sup> Although these results are promising, additional research is required to determine their generalizability and to expand consideration to the variety of other outcomes also expected to be affected by improvements in work design.

To summarize, the relevant evidence seems to support the conclusion that work design implementations stimulated by the quality perspective may have positive effects on workforce motivation, satisfaction, and productivity. This evidence is far from conclusive, and additional information is needed to prove the perspective’s true benefits.<sup>51</sup>

## Summary

Contemporary work design began with Frederick Taylor, Frank and Lillian Gilbreth, and other experts whose work on *industrial engineering* served as the foundations of the *efficiency perspective* on work design. Within this perspective, *methods engineering* attempts to improve the methods used to perform work, and *work measurement* examines the motions and time required to complete each job. A second approach to work design was first developed when Frederick Herzberg differentiated between *motivator* and *hygiene factors*. Other specialists later extended this perspective by introducing early models of *horizontal job enlargement* and *vertical job enrichment*. The *motivational perspective* emerged as work progressed on *comprehensive job enrichment programs* and on *sociotechnical job enrichment*. A third approach, the *quality perspective*, then emerged as experience with *Total Quality Management* programs indicated that *quality circles*, *self-managing teams*, *automation*, and *process management* could be used as alternatives to traditional job assignments during the process of work design. Incorporated in this third perspective were elements of both the efficiency and the motivational perspectives that preceded its development.

## Review Questions

1. Explain how following Taylor's principles of scientific management can simplify the jobs in an organization. What are some positive effects of this simplification? What negative effects might occur?
2. What do the fields of process engineering and human factors engineering have in common? How do they differ from one another? Are they more likely to enhance satisfaction or efficiency? Why?
3. How does the quality perspective differ from the efficiency and motivational perspectives? What similarities does it share with each of the other two? How do concerns about quality affect the design of jobs?
4. The quality perspective includes quality circles, self-managed teams, automation, and process management. Which of these approaches would you *not* select to enrich jobs in a newly built assembly line? Why not? Which would you use to design jobs that resist all attempts at enrichment?



# Interdependence and Role Relationships

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The year 2008 was a bad one for Merrill Lynch. The company lost over \$12 billion and, in order to avert total bankruptcy, had to agree to a humiliating acquisition by Bank of America, one of its former competitors. The general perception of the public at large was that Merrill Lynch was a total failure, and that this was largely due to the bad decisions of its overpaid executives. Most people felt that even the Bank of America buyout was only made possible because of the large government bailout granted to the banking industry—a bailout that was funded by American taxpayers.<sup>1</sup> With this as background it is easy to understand why the world was shocked when the CEO of Merrill, John Thain, requested a \$10 million bonus for the year from the company's compensation committee.<sup>2</sup>

However, despite the public outcry, Thain was unrepentant and persisted in his claim that the bonus was fair. He noted that he was the one who engineered the Bank of America deal and that this saved the shareholders billions of dollars. He also pointed out that his actions prevented the total destruction of the company, and his performance was better than that of the CEOs of other firms like Lehman Brothers, which essentially did go out of business. As a comparison, he noted that the CEO of Lehman Brothers, Richard Fuld, had taken home over \$450 million in bonuses from 2000 to 2007, prior to the declaration of bankruptcy. Thus, compared to that, Thain's request, *from his own perspective*, was more than fair.

Thain failed to realize, however, that almost no one in government *shared his perspective*. The government bailout changed everything on Wall Street. Prior to the bailout, although there were general misgivings regarding outsized executive salaries, this was considered a private matter between the firms and their shareholders. However, once it became clear that these companies needed the American taxpayer to bail them out, this created a level of *interdependence* between the firms and the taxpayers (and hence the government), and this new relationship was going to have to go both ways. Senator Harry Waxman noted that “We can't have a system where Wall Street executives privatize all the gains and socialize all the losses,” clarifying for all the nature of this new relationship. New York Attorney General Andrew Cuomo summed up everyone's feelings when he stated that “clearly, the performance of Merrill's top executives throughout Merrill's abysmal year in no way justifies significant bonuses for its top executives, including the CEO.”<sup>3</sup> In the face of this pressure from the government, the bonus bid was eventually dropped, although to this day Thain maintains that this was unfair.<sup>4</sup>

Our last chapter dealt with jobs and how they can be designed to enhance the fit between tasks and individual people. Jobs and the individuals who hold these jobs do not exist in a vacuum, however. Rather, in organizations, jobs and individuals are linked to each other, and much of the competitive success of an organization can be traced to how well the relationships

between jobs and individuals are managed. Thus, managers need to know about various factors that affect people as they *work together*.

We begin this chapter by identifying several different patterns of *interdependence* that develop among people and connect them as they work with one another. For example, in our opening story, after the government bailout, it was now the case that Wall Street and the government were dependent on each other. The companies were obviously dependent on the government because they could not go forward without the bailout. In turn, the government was dependent on the companies, in the sense that it could not afford to let all of these companies go out of business, but it also could not engage in a series of endless bailouts. In order to avoid a total collapse of the financial system, the two sides needed to work together.

Next we note that people occupy specific *roles* in the networks of interdependence they share with others, and we examine the process of *communication*, which is the glue that holds role occupants together. Thus, the decisions that were contemplated on Wall Street now had to be communicated to government agencies, which in turn had to listen to their own constituents. At no time is this communication more important than when people are first introduced into their organizational roles, and thus we will pay particular attention to *socialization* processes through which individuals learn about the roles they are expected to fill. For example, John Thain was clearly not ready for his new CEO role that included heavy federal oversight, and misunderstandings and miscommunications are particularly problematic with new or changing roles.

Finally, we conclude the chapter by examining *equity theory* as a framework for judging and enhancing the quality of relationships between individuals and organizations in terms of fairness. If people feel that they are being treated fairly in their organizational relationships, the quality of relationships will be high, and over time this can lead to trust and a long-term focus on well-coordinated efforts. However, if this trust is violated and people feel that they are being treated unfairly, this can destroy teamwork.<sup>5</sup> Moreover, as was the case on Wall Street in 2008, it is often very difficult to rebuild the level of trust to the point where people are not constantly checking on each other and, in the process, taking their focus off the larger task they are trying to accomplish.

## Patterns of Interdependence and Organizational Roles

People in organizations share a rich variety of connections. Their work may require them to associate with one another as a regular part of job performance. They may band together to share resources, such as access to valuable equipment or financial resources, even when their work does not require direct contact between individuals. Such connections make interpersonal relations a very important aspect of organizational life. Among both individuals and groups, these relationships take the form of patterns or networks of interdependence.

### Types of Interdependence

In the workplace, interdependence typically takes one of the four forms diagrammed in Figure 8.1: pooled, sequential, reciprocal, or comprehensive interdependence.

**Pooled interdependence** occurs when people draw resources from a shared source but have little else in common. Resources pooled together in this manner might include money, equipment, raw materials, information, or expertise. As the simplest form of interdependence, pooled interdependence requires little or no interpersonal interaction. In a company like Metropolitan Life Insurance, for example, individual data-entry specialists draw off a common pool of work that must be entered into the firm's computers. Each person works alone to

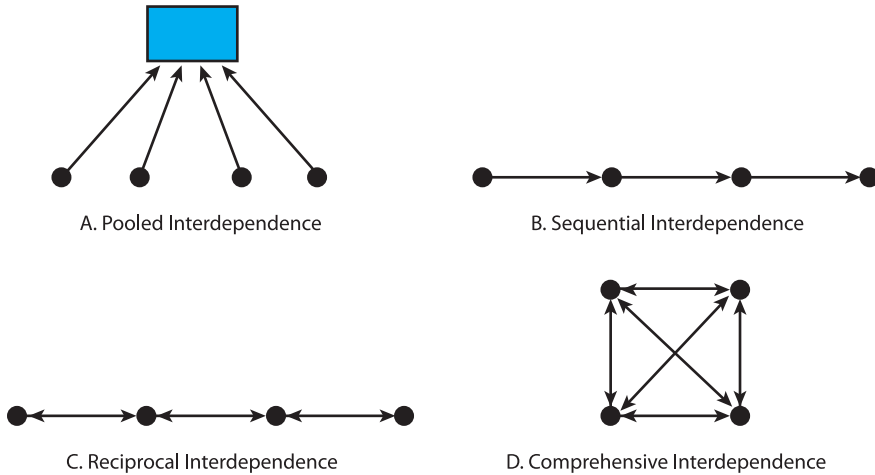


Figure 8.1 Types of Interdependence

perform the task of entering information, however. That is, the task itself requires little interaction with other employees.

**Sequential interdependence** consists of a chain of one-way interactions in which people depend on those individuals who precede them in the chain. People earlier in the chain, however, remain independent of those who follow them. Thus sequentially interdependent relationships are said to be *asymmetric*, meaning that some people depend on others who do not in turn depend on them. For example, employees at Steelcase who work on an assembly line manufacturing office furniture are connected by sequential interdependence. Workers earlier in the line produce partial assemblies, which workers later in the line complete.

By its very nature, sequential interdependence prevents people at the end of the chain from performing their jobs unless people at the head of the chain have already carried out their tasks. On the other hand, people at the head of the chain can complete their tasks no matter what people at the other end do. Research shows that sequential systems like this are very sensitive to differences either between people in their performance (two workers who operate at different speeds) or between the same person at different times (a worker who operates faster in the morning than in the afternoon). Performance variability can “starve” workers down the line if the work moves too slow or “block” the line if it moves faster than the next person can handle it. Thus, people who are dependent tend to experience more stress and feel less powerful in these asymmetric relationships than those who are independent.<sup>6</sup>

In **reciprocal interdependence**, a network of two-way relationships ties a collection of people together. A good example of this kind of interdependence is the relationship between a sales force and a clerical staff. Sales representatives rely on clerks to complete invoices and process credit card receipts, and clerks depend on salespeople to generate sales. Reciprocal interdependence also occurs among the members of a hospital staff. Doctors depend on nurses to check patients periodically, administer medications, and report alarming symptoms. Nurses, in turn, depend on doctors to prescribe medications and to specify the nature of symptoms associated with potential complications.

Reciprocal interdependence always involves some sort of direct interaction, such as face-to-face communication, telephone conversations, or written instructions. As a result, people who are reciprocally interdependent are more tightly interconnected than are individuals who are

interconnected by either pooled or sequential interdependence. Reciprocal interdependence incorporates symmetric, two-way interactions in which each person depends on the person who depends on him or her. The symmetric nature of this relationship makes people feel more equal to one another with respect to power and promotes helping behavior going in both directions.<sup>7</sup>

**Comprehensive interdependence** develops in a tight network of reciprocal interdependence. It is the most complex form of interdependence, because everyone involved is reciprocally interdependent with the others. As in reciprocal interdependence, people who depend on one another interact directly. In comprehensive interdependence, however, these interactions tend to be more frequent, more intense, and of greater duration than in any other type of interdependence.

For example, in the brand-management groups that oversee the development of new products at firms such as Colgate-Palmolive and Procter & Gamble, product designers, market researchers, production engineers, and sales representatives are all linked by a completely connected network of two-way relationships. The product designers interact with the market researchers, product engineers, and sales representatives. The market researchers also interact with the product engineers and the sales staff, who in turn interact with each other. In groups that experience comprehensive interdependence, systems that allow for direct peer monitoring and input into performance appraisals are critical for long-term success and viability.<sup>8</sup>

### Implications of Interdependence

The type of interdependence that connects people together in interpersonal relationships has several important managerial implications. First, a greater potential for conflict arises as the complexity of the interdependence grows in moving from pooled to comprehensive interdependence. Sharing a greater number of interconnections and being more tightly connected increase the likelihood that differences in opinions, goals, or outcomes will be noticed and disputed, and this can be particularly an issue in self-managing groups that cannot simply turn to a leader to resolve all their discrepancies.<sup>9</sup> In groups like this, small conflicts can often escalate and spiral up over time, often leading to major conflicts in the future.<sup>10</sup> Indeed, all the evidence seems to suggest that trust builds up very slowly over time, but breaks down very quickly.<sup>11</sup>

Second, the loss of individuals due to turnover becomes more important as the intensity of the interdependence increases. One person's departure requires that few relationships be rebuilt under conditions of pooled or sequential interdependence. In situations characterized by reciprocal or comprehensive interdependence, however, many more relationships must be redeveloped if a new individual is introduced into the system. In some cases of extreme interdependence, the loss of even a single person can make everyone else perform below par, and it can take a very long time to get the group back up to the level of trust that they had experienced formerly.<sup>12</sup>

Third, comprehensive interdependence can stimulate greater flexibility and enable groups of people to adapt more quickly to changing environments than groups unified by less complex forms of interdependence. As discussed more fully in Chapter 9, this flexibility requires that greater attention be paid to maintaining continued interdependence, and it can contribute to *process loss* and reduced productivity if managed unwisely.

Fourth, the type of interdependence has implications for the design of motivational systems. Group-level goals and group-level feedback are associated with high performance in organizations utilizing sequential, reciprocal, or comprehensive interdependence, but

individual-level goals and performance feedback work best for people connected via pooled interdependence.<sup>13</sup>

### Role Taking and Role Making

As interdependent people associate with one another and gain experience with interpersonal relations, they come to expect other individuals to behave in specific ways. These expectations may be based partially on the formal job descriptions that each person has, but typically go well beyond the written description of the job. Expectations such as these, and the behaviors they presuppose, form the **roles** that individuals occupy in interpersonal relations.<sup>14</sup> Chapter 6 introduced the concept of work-related roles, which were described there as a source of dissatisfaction and stress. This chapter will elaborate on the concept of a role, using it as a framework for understanding how interpersonal relationships develop and sometimes break down.

As indicated in Table 8.1, the behavioral expectations that make up such roles can include formal *established task elements* that are generally determined by a company's management as well as many other informal *emergent task elements* that evolve over time as interpersonal relations develop and mature.<sup>15</sup>

**Established task elements** are the parts of a role that arise because the role occupant is expected to perform a particular *job*. A job is a formal position, often accompanied by a written statement of the tasks it entails. Such written statements, called *job descriptions*, are generally prepared by managers or specialists with expertise in job analysis and description. When such descriptions exist, a fair amount of agreement usually exists at the outset regarding what constitutes the established task elements of a role.

Because job descriptions are prepared before the fact by people who do not actually perform the job, they are often incomplete. Moreover, most do not account for job incumbents' personal characteristics or the complex and dynamic environments in which jobs must be performed. Thus, as a person begins to do a job, it often becomes clear that tasks omitted from the written job description must be performed to successfully fulfill the role. These added-on tasks are referred to as **emergent task elements**. Rather than being written down, these emergent elements tend to be assumed and taken for granted. Over time, people develop systems of implicit coordination with one another that are enacted without a great deal of explicit communication.<sup>16</sup> In well-developed groups like these, each person specializes in keeping track of specific types of information and knowledge, and these **transactional memory systems** make the group much more efficient in terms of processing information.

Table 8.1 Elements of Work Roles

<i>Established task elements</i>	<i>Emergent task elements</i>
1. Created by managers or specialists, independently of the role incumbent	1. Created by everyone who has a stake in how the role is performed, including the role incumbent
2. Characterized by elements that are objective, that are formally documented, and about which there is considerable consensus	2. Characterized by elements that are subjective, not formally documented, and open to negotiation
3. Static and relatively constant	3. Constantly changing and developing



Each group member does not have to remember every important fact, but instead only needs to know “who knows what” and how to tap into that person’s expertise.<sup>17</sup>

Established and emergent task elements can be combined in different ways. At one extreme is the *bureaucratic prototype*, in which the role occupant performs few duties other than the ones written in the job description. When people move into these highly prescribed roles, they engage in role taking. Many low-level jobs in automated, assembly-line factories are of this type. At the other extreme is the *loose-cannon prototype*, in which emergent elements greatly outnumber the few established elements. When people move into this kind of loosely defined role, they engage in role making—a term that highlights the degree to which the role occupant “builds or constructs” his or her own role. Organizations are structured in terms of roles rather than in terms of the unique acts of specific individuals. Consequently, they can remain stable despite persistent turnover of personnel. For this reason, roles are of crucial importance to organizations and a central concern for those charged with managing organizational behavior.

### Norms and Role Episodes

As indicated in Figure 8.2, the expectations that make up roles and give shape to interpersonal relations are called **norms**. Norms develop over time through repeated interaction; in many instances, group members may not even be aware that they exist.<sup>18</sup> For example, in a class, norms direct students to sit down and wait for the instructor to begin the day’s activities. Norms may also direct students to participate in class discussions and exercises. Without such norms, each class meeting would require the instructor to reestablish the basic rules of behavior and set an agenda for the day. You would therefore have much less time available to pursue the learning activities on the schedule.

In organizations, norms exist for both the job’s formal requirements, or its established task elements, and the job’s generally agreed-upon informal rules, or emergent task elements. Either type may evolve from a variety of sources. Sometimes *precedents* that are established in early exchanges simply persist over time and become norms. For example, students take certain seats on the first day of class and, even though the instructor may not establish a formal seating arrangement, the students may tend to return to the same seats for each session. Norms may also be *carryovers* from other situations. In such instances, people may generalize from what they have done in the past in other, similar situations. For instance, a person may stand when making a presentation at a meeting because he or she was required to stand in prior meetings. Sometimes norms reflect *explicit statements from others*. A part-time summer worker, for instance, may be told by more experienced workers to “slow down and save some work for tomorrow.”

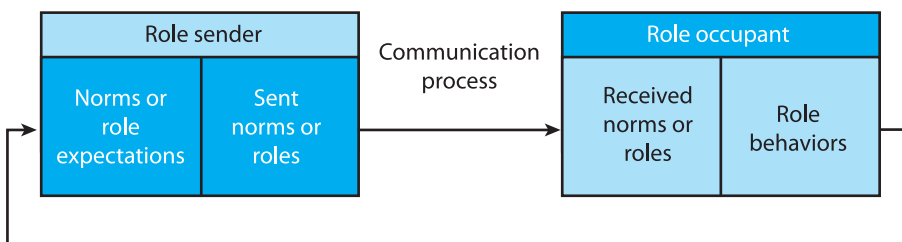


Figure 8.2 The Role-Taking Process

Source: Adapted from D. Katz and R. L. Kahn, *The Social Psychology of Organizations* (New York: Wiley, 1978), p. 112.

Finally, some *critical historical event* may influence norms. Suppose, for example, that a secretary leaks important company secrets to a competitor. In response to this incident, a norm may evolve that requires all sensitive information to be typed by managers, not delegated to the secretarial staff. This new norm may even be written into job descriptions, thus taking what was once an informal, emergent element and converting it to a formal, established element. If this occurs over and over again, the organization can become full of written rules and procedures, which makes it very rigid and bureaucratic. Thus, something that starts out as an adaptive process (formalizing norms), if left unchecked, can become a maladaptive process (excessive formalization). Because of this, it is critical to distinguish pivotal norms from peripheral norms.

Adherence to the first type of norms, **pivotal norms**, is an absolute requirement if interpersonal relations are to persist and work is to be performed without major interruption. Failure to adopt such norms threatens the survival of existing interpersonal relations and continued interdependence. For example, in 2009, Starbucks garnered a great deal of negative publicity when one of its franchises fired three workers who were part of a group trying to unionize the company's workers. This is a potential violation of one of the major components of the Fair Labor Standards Act and hence against the law. This is a pivotal norm, and management does not have the discretion to just fire workers because they are trying to organize a union.

However, beyond this, as a company, Starbucks also tried to maintain an image that suggested to both future employees and customers that it was socially aware and sensitive to worker rights. Organizations do not necessarily have to be socially aware or sensitive to worker rights, and therefore this would be considered a **peripheral norm**. These peripheral norms are not formally required, but they can strongly influence the character of the interpersonal relations if they are violated. For example, according to one public relations expert in the industry, many customers "picked up the narrative that Starbucks is posing to be somebody they are not," and this hurt sales in some regions.<sup>19</sup>

Another type of peripheral norm might be the practice of sharing detailed financial information with all employees. This kind of "open-book management" is not required, but many organizations routinely practice this anyway because it has been shown to promote employee trust and willingness to cooperate.<sup>20</sup> In the wake of the recent corporate scandals, some CEOs have moved in this direction voluntarily.<sup>21</sup> In other cases, union leaders and shareholders have pressed for it more directly.<sup>22</sup> In still other cases, the government has threatened to demand it, suggesting that there may be a need for laws that would convert this from a peripheral norm to a pivotal norm.<sup>23</sup>

Whether interdependent individuals adopt pivotal and peripheral norms has important consequences for their behaviors and performance as members of groups and organizations. As Table 8.2 indicates, *individual adjustment*, or the acceptance or rejection of these norms,

**Table 8.2** Norms and Individual Adjustment

		<i>Pivotal norms</i>	
		<i>Accept</i>	<i>Reject</i>
Peripheral norms	Accept	Conformity	Subversive rebellion
	Reject	Creative individualism	Open revolution

Source: From *Organization Psychology*, 3rd ed., by E. H. Schein, p. 100. Copyright © 1980. Reprinted by permission of Pearson Education, Inc., Upper Saddle River, NJ.

leads to four basic behavior patterns: conformity, subversive rebellion, open revolution, and creative individualism.

When role occupants choose to accept both pivotal and peripheral norms, the resulting **conformity** is marked by a tendency to try to fit in with others in a loyal but uncreative way. People who conform to all norms become caretakers of the past. So long as tasks remain unchanged and the work situation is stable, conformity can facilitate productivity and performance. Conversely, it can endanger the organization's long-term survival if tasks or the surrounding situation changes significantly. In groups where conformity is very high, individual differences are largely eliminated and one can predict behavior better by examining the norms rather than the individual person's own thoughts and tendencies. For example, most groups have strong norms for how important attendance is and, when a person moves from a group with norms that have zero tolerance for absenteeism to a group where the standards are less strict, that person's rate of absenteeism tends to go up.<sup>24</sup>

When individuals accept peripheral norms but reject pivotal ones, the result is **subversive rebellion**. That is, people conceal their rejection of norms that are critical to the survival of existing interpersonal relations by acting in accordance with less important ones. This outward show of conformity may make it possible for rebellious members to continue occupying important roles. If their number is large, however, their failure to adhere to important pivotal norms may jeopardize the survival of ongoing interpersonal relations.

**Open revolution** may break out if role occupants reject both pivotal and peripheral norms. If only a few individuals revolt, they may be pressured to conform or asked to leave. Interpersonal relations dominated by open revolution, however, may simply fall apart.

In **creative individualism**, individuals accept pivotal norms but reject peripheral ones. This behavior ensures continued productivity and survival. It also opens the door to the individual creativity needed to develop new ways of doing things. Creative individualism is, therefore, especially desirable when dealing with change in tasks or work situations. It ensures that individuals have the freedom to invent new responses to changing conditions. This type of creativity is often sought because norms do not always remain effective over time.

Norms develop through a series of role episodes. A **role set** comprises a collection of people who interact with a role occupant and serve as the source of the norms that influence that person's behaviors (see Figure 8.2). A typical role set includes such people as an employee's supervisor, peers, and subordinates, other members of the employee's functional unit, and members of adjacent functional units that share tasks, clients, or customers. Members of the role set communicate norms to the role occupant via *role-sending messages*.

Some role-sending messages are informational, telling the role occupant what is going on. Others attempt to influence the role occupant (for example, by letting him or her know what punishments will follow if the individual disregards norms). Some of these messages may be directed toward accomplishing organizational objectives. Others may be unrelated to, or even contrary to, official requirements.

As long as the role occupant complies with these expectations, role senders will attend to their own jobs. If the role occupant begins to deviate from expectations, however, the role senders, their expectations, and their means of enforcing compliance will become quite visible. For example, although the recipes of famous chefs are not covered directly by intellectual property laws, there are strong norms associated with "stealing" other people's recipes in this industry. For example, in France, a chef who is found to have stolen recipes will be called out in public by his peers. If it happens once, he or she will become the victim of derision, practical jokes, or isolation. If it happens more than once, the group itself will collude to make it difficult for the person to find work anywhere in the region.<sup>25</sup>

Although the members of the organization communicate the dos and don'ts associated

with a role through the *sent role*, the *received role* actually has the most immediate influence on the behavior of the role occupant. As discussed later in this chapter, factors that influence the process of communication may distort a message or cause it to be misunderstood. Even when messages are communicated effectively, role occupants often fail to meet senders' role expectations. Several types of role conflict (as discussed in Chapter 6) can prevent a role receiver from meeting the expectations of a sender.

First, *intersender role conflict* may place competing, mutually exclusive demands on the role occupant. A person who meets one sender's expectations may violate the expectations of another. In addition, the role occupant may experience *person–role conflict* and have some ideas about how the role should be performed that conflict with the role sender's demands. Finally, *interrole conflict*, caused by occupying two roles at once (for example, being a manager and a parent), can create stress both at home and at work.<sup>26</sup> Thus, role making and taking is a process characterized not by unilateral demands and forced acceptance but instead by flexibility and give-and-take negotiation. Indeed, the amount of flexibility in terms of how tightly or loosely roles are regulated is emerging as one of the most important aspects of cultural differences across countries.<sup>27</sup>

## Communication Processes in Interdependent Relationships

In Figure 8.2, a straight line was drawn between the sent role and the received role to denote the communication of a message between members of the role set and the role occupant. A more detailed representation of the process of communication breaks it into three general stages: encoding information into a message, transmitting the message via a medium, and decoding information from the received message.<sup>28</sup> Because problems can develop at any one of these stages, it is important to understand what happens at each stage, and how this might translate into barriers to effective communication.

### Communication Messages and Media

Encoding is the process by which a communicator's abstract idea is translated into the symbols of language and thus into a message that can be transmitted to someone else. The idea is subjective and known only to the communicator. Because it employs a common system of symbols, the message can be understood by other people who know the communicator's language.

The *medium*, or the carrier of the message, exists outside the communicator and can be perceived by everyone. We can characterize media by the human senses on which they rely: oral speech, which uses hearing; written documentation, which uses vision or touch (Braille); and nonverbal communication, which may use at least four of the five basic senses.

Nowhere is technology having a greater effect on the workplace than in the area of communication media. Facsimile (fax), electronic mail (e-mail), chat rooms, text messaging, social networking sites, cellular phones, and developments in push-to-talk connectivity have created an ever increasing menu of options in terms of finding the best medium for each message. Thus, learning how to match the medium with the message has never been more challenging.

*Oral communication* relies predominantly on the sense of hearing; its symbols are based on sounds and consist of spoken language. Face-to-face conversations, meetings, and telephone calls are the most commonly used forms of communication in organizations. As you will recall from Chapter 1, as much as 75 percent of a manager's time is devoted to meetings

and telephone calls.<sup>29</sup> Oral communications offer the advantage of speed. One can encode information quickly, and the feedback cycle is rapid. If receivers are unclear about the message, they can immediately ask for clarification. Presenting a proposal orally, for example, provides much more opportunity for answering questions than does preparing a written report. Oral messages are generally efficient in handling the day-to-day problems that arise in groups and organizations. In addition, strong narratives and story-telling skills are necessary to help convey emotionally laden information or information related to the organization's core values, especially if these are changing.<sup>30</sup>

Sometimes *written communication* is preferred over oral communication. Although written messages are more slowly encoded, they allow the communicator to use more precise language. A sentence in a labor contract, for example, can be rewritten many times to ensure that everyone involved knows exactly what it means. The aim is to minimize the possibility of any future confusion or argument over interpretation. Written materials also provide a permanent copy of the communication that can be stored and retrieved for later purposes. For example, a supervisor may write a formal memo to an employee, noting that she has been late for work 10 of the last 11 days and warning that failure to arrive on time will result in her dismissal. If the behavior continues, the supervisor has documentary evidence that the employee received fair warning.

Indeed, one of the problems caused by new communication media such as e-mail is that people get confused regarding the strengths and weaknesses of the media. For example, most people treat e-mail as if it is a form of oral communication, ignoring grammar, writing style, and form, in return for quick and informal communication. Many e-mails are "zipped off" in a hurry, without a great deal of planning and forethought as to their content and expression. However, e-mail is in fact a written form of communication that leaves a paper trail, providing written documentation of ideas that one may later regret. Thus, when Merrill Lynch stock analyst Henry Blodgett told his clients in a formal letter to "accumulate" a certain stock, and then a day later turned around and told a friend in an e-mail that the same stock was "a piece of crap," this set the stage for a \$100 million conflict-of-interest lawsuit.<sup>31</sup> Indeed, recovered e-mails are more often than not the "smoking gun" evidence that forms the basis for many of the legal actions brought against unethical organizations, including suits where the charge is destruction of e-mail evidence.<sup>32</sup>

In addition to oral and written communication, owing to our long evolutionary history, humans have developed nonverbal ways to communicate, and these nonverbal messages are often underestimated in terms of their power. For example, you can gauge how interested two people are in a conversation by their timing of responses to one another's messages. When two people are intently interested in the conversation, they often anticipate one another's thoughts and respond quickly, often completing each other's sentences. Slow rhythms in conversation, on the other hand, signal a lack of interest or understanding. Similarly, like our evolutionary ancestors, humans often mimic each other in conversations where there is a high interest level, and adopt the hand and head motions of those whom they admire. Failure to mimic implies a lack of attention, agreement, or respect and is a sign that one is not getting through to the intended audience.<sup>33</sup>

To complete the communication process, the message sent must be subjected to decoding, a process in which the message is translated in the mind of the receiver. When all works well, the resulting idea or mental image corresponds closely to the sender's idea or mental image. Unfortunately, myriad things can go wrong and render communication ineffective. The term **noise** refers to the factors that can distort a message. Noise can occur at any stage of the process, and is particularly problematic when two people are from different cultures.<sup>34</sup>

### Barriers to Effective Communication

A variety of organizational, interpersonal, and individual factors can hinder communication within groups or organizations. For instance, the nature of the physical space occupied by jobholders inevitably affects patterns of communication. If an organization wants to promote the development of interpersonal relations, it must place people in close physical proximity. People who work closely together have more opportunities to interact and are more likely to form lasting relationships than are people who are physically distant from one another. This is even true if people who are physically distant can communicate frequently via electronic media like e-mail. For this reason, many organizations invest in richer electronic communication media such as video-conferencing that allow people to “see” one another. Although helpful in terms of developing cohesiveness and trust, rich media do not seem to be a total replacement for face-to-face interpersonal communication, which is important in this regard.<sup>35</sup>

Whether the purpose of the communication is to inform or persuade, the *credibility* of the source will largely determine whether the role occupant internalizes the message. Credibility refers to the degree to which the information provided by the source is believable, and it is a function of three factors:

- expertise, or the source’s knowledge of the topic at hand
- trustworthiness, or the degree to which the recipient believes the communicator has no hidden motives
- consistency between words and actions

Credibility is low whenever the source of the communication is uninformed, is untrustworthy, or acts in a way that contradicts the individual’s words. For example, after the war with Iraq, the failure of the United States to uncover weapons of mass destruction led many to question the administration’s credibility, because this was one of the primary justifications for the war. This perception was particularly acute when it became clear that some of the evidence that the president mentioned in a nationally televised speech to the nation was based on forged documents.<sup>36</sup> Although few believed that the president knew that the evidence was forged, and therefore deliberately misled the public, the fact that he was uninformed because of failure within the intelligence community still harmed his credibility.

A *power imbalance* between a role sender and a role occupant can also impede communication. For example, *upward communication* flows from people low in the organizational hierarchy to people above them. Because people at upper levels of the hierarchy have a great deal of power to reward and punish employees at lower levels, the latter are sometimes inhibited in their upward communication. Insecure lower-level workers may tend to forget about losses and exaggerate gains when reporting information upward, leaving managers at upper levels with a distorted sense of reality. Similarly, lower-level employees who are unsure about how to perform their jobs or critical aspects of the organization’s mission may be reluctant to ask questions, fearing to appear less than knowledgeable. Some organizations, such as DuPont, will actually conduct anonymous polls of the lower-level employees to gauge what they do and do not seem to know about the company, in order to get an unbiased assessment of how well they are communicating to all levels.<sup>37</sup> Upper-level managers who fail to do this may also get a distorted view of the competencies and knowledge of those who serve under them.

Some leaders unwittingly contribute to this problem, by “shooting the messenger” or surrounding themselves with “yes people.” In this context, the manager receives only positive

feedback on his or her personal performance or the performance of the organization, setting the manager up for future failure. The pervasiveness of this problem has led many top leaders to turn to executive coaches, who provide an external and often painful assessment of the manager's weaknesses in the realm of interpersonal relations. As one such executive coach has noted, "CEOs get hired for their skills but fired for their personalities."<sup>38</sup> The research evidence suggests that this kind of coaching can have modest effects in terms of improving the manager's receptivity to negative feedback, which in turn enhances his or her performance.<sup>39</sup>

Finally, distortion can occur because of jargon. **Jargon** is an informal language shared by long-tenured, central members of units. Within a small closed group, it can be extremely useful. It maximizes information exchange with a minimum of time and symbols by taking advantage of the shared training and experience of its users. On the other hand, because jargon is likely to confuse anyone lacking the same training and experience, it can create a barrier to communication with new members or between different groups. Often technical specialists use jargon unconsciously and may find it difficult to express themselves in any other terms. This habit can become a permanent disability, greatly reducing people's career opportunities outside their own small groups.

## Socialization to New Roles

Although effective communication is always important within organizations, perhaps at no time is it more critical than when a person assumes a new role. **Socialization** is the procedure through which people acquire the social knowledge and skills necessary to correctly assume new roles in a group or an organization.<sup>40</sup> This process of "learning the ropes" entails much more than simply learning the technical requirements associated with one's job. It also deals with learning about the group or organization, its values, its culture, its past history, its potential, and the role occupant's position in the overall scheme. Although most people think of socialization only in terms of someone joining a group or organization for the first time, in fact socialization is an ongoing process. It occurs whenever an individual moves into a new role within the group or organization. A role can be considered "new" for an individual as long as it differs from the previous role on any one of three dimensions: functional, hierarchical, or inclusionary.

The *functional* dimension reflects differences in the tasks performed by members of a group or an organization. Figure 8.3A shows the typical functional groupings of a conventional business organization: marketing, production, accounting, human resources, research and development, and finance. Similarly, Figure 8.3B depicts the functional groupings common to many universities: the schools of business, engineering, medicine, social sciences, law, and arts and letters. The roles performed in each group are quite distinct, because the jobholders are trying to accomplish different aspects of the organization's overall mission.

The *hierarchical* dimension concerns the distribution of rank and authority in a group or an organization. As you will recall from Chapter 1, a hierarchy establishes who is officially responsible for the actions of whom. In traditional organizations, this dimension takes the shape of a pyramid, in which fewer people occupy the highest ranks. The roles performed by people higher in the pyramid differ from the roles assumed by individuals lower in the pyramid largely in that the former have greater authority and power. In a highly centralized organization, this triangle is often rather steep. Figure 8.4A depicts one such pyramid, representing the hierarchical structure of a hypothetical military organization. In a more decentralized organization, fewer levels of authority exist and the hierarchical pyramid looks flatter. As indicated in Figure 8.4B, city police departments usually have fewer levels of

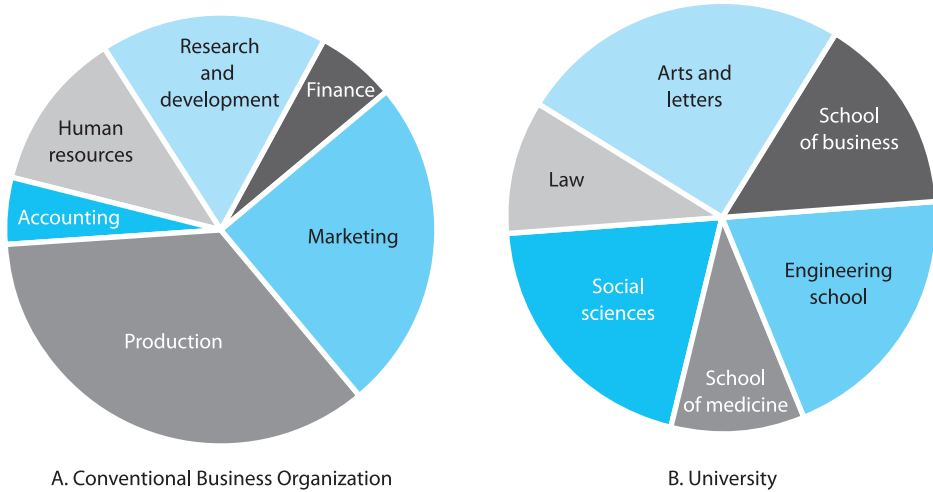


Figure 8.3 The Functional Dimension of Organizations

hierarchy than an army. Most employees are arresting officers, the highest rank is captain, and only two genuine levels of hierarchy separate the top and the bottom.

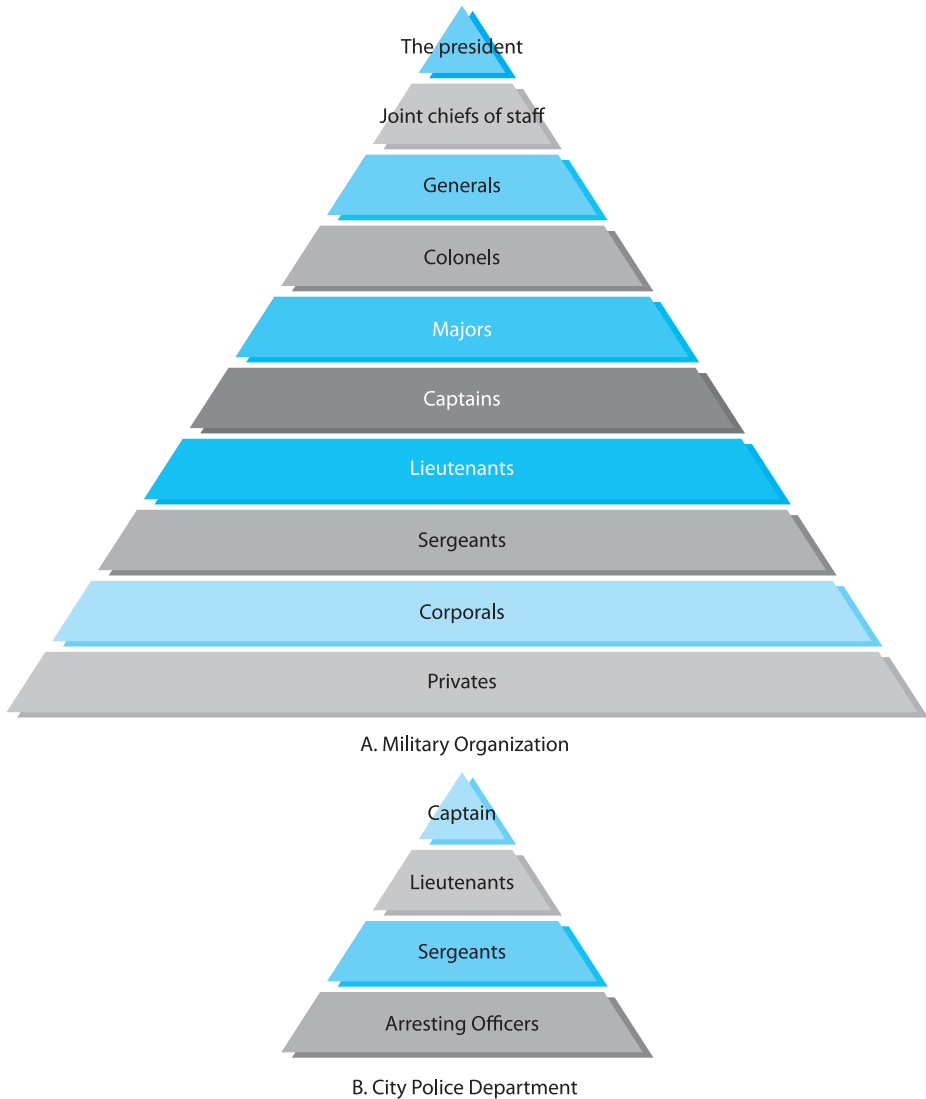
The *inclusionary* dimension reflects the degree to which an employee of an organization finds himself or herself at the center or on the periphery of things. As shown in Figure 8.5, a person may move from being an outsider, beyond the organization's periphery, to being an informal leader, at the center of the organization. A job applicant, or outsider, joins the organization and becomes a newcomer, just inside the periphery. For this employee to move further along the radial dimension shown in Figure 8.5, others must accept the newcomer as a full member of the organization. This move can be accomplished only by proving that the individual shares the same assumptions as others about what is important and what is not. Usually, newcomers must first be tested—formally or informally—as to their abilities, motives, and values before they are granted inclusionary rights and privileges.

Women, minorities, and people from different cultures often find it particularly difficult to advance along this dimension in traditional organizations, and organizations can often speed their development by creating “social networks” that make it easy for them to find similar others throughout the organization. This opens up communication channels and opportunities for interaction and mentorship that might not have otherwise been possible.<sup>41</sup> The provision of specialized socialization programs targeted to these types of subgroups can also be instrumental in speeding up the adjustment process.<sup>42</sup>

Socialization occurs whenever an individual crosses boundaries in any of the three dimensions—for instance, transferring between functional departments or being promoted to a position of higher authority. When moving across functional boundaries, the key concern is the person–job fit, and the major attributes considered during this transition are the person's knowledge, skills, and abilities. For the hierarchical and inclusionary boundaries, the person's values and personality traits seem to become more relevant concerns.<sup>43</sup>

Socialization is likely to be particularly intense when a person crosses all three boundaries at once. When a person joins a new organization, he or she crosses the inclusionary boundary, moving from nonmember to member status, and crosses functional and hierarchical boundaries by joining a particular functional unit, such as the advertising department, at a





**Figure 8.4** The Hierarchical Dimension of Organizations

specific hierarchical level, such as account executive. It is at this time that the organization has the most instructing and persuading to accomplish. It is also the time when a person may have the least accurate expectations and, therefore, is most susceptible to being taught and influenced.<sup>44</sup> If handled well, this instruction can lead to increased role clarity, self-efficacy and social acceptance, which in turn promotes commitment to the role, job performance, and retention.<sup>45</sup>

### **Socialization Goals and Tactics**

Although instructing individuals about their roles is part of all socialization programs, different firms may seek to accomplish different goals in this process. Some organizations may

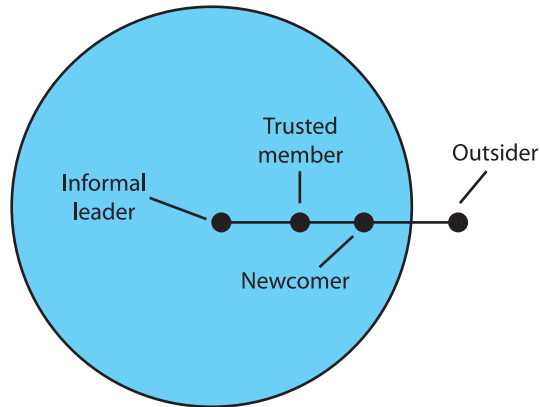


Figure 8.5 The Inclusory Dimension of Organizations

Source: Adapted from D. Katz and R. L. Kahn, *The Social Psychology of Organizations* (New York: Wiley, 1978), p. 112.

pursue a **role custodianship** response. Here, recipients of socialization take a caretaker's stance toward their roles. They do not question the status quo but instead conform to it. A popular expression in the U.S. Marine Corps, paraphrased from Tennyson's "Charge of the Light Brigade," is "Ours is not to question why; ours is but to do or die." When an organization hopes instead that recipients of socialization will change either the way their roles are performed or the ends sought through role performance, it may have **role innovation** as a goal.

Firms can use any of several tactics in socializing new members, each of which has different effects. As shown in Figure 8.6, we can classify these strategies along four critical dimensions to help understand their likely consequences: collective–individual, sequential–random, serial–disjunctive, and divestiture–investiture. The first alternative in each pair brings about a custodianship response from the new member. The second alternative of each pair leads the recipient toward role innovation.

In *collective socialization*, recipients are put in groups and go through socialization experiences together. This method is characteristic of military boot camps, fraternities, sororities, and management-training courses. In collective processes, the recruits accomplish much of the socialization themselves. For example, Marine Corps recruits may abuse one another verbally or even physically in a way that the formal institution never could.

In *individual socialization*, the second alternative in this pair, new members are taken one at a time and put through unique experiences. This treatment is characteristic of apprenticeship programs or on-the-job learning. It yields much more variable results than collective socialization does, and its success depends heavily on the qualities of the individual recruit.

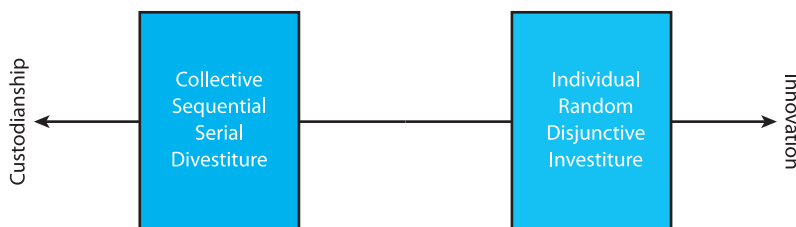


Figure 8.6 The Custodianship–Innovation Continuum and Its Socialization Techniques

In the second dimension of socialization, the alternative of *sequential socialization* takes new members through a set sequence of discrete and identifiable steps leading to the target role. A physician's training, for example, includes several observable steps: the undergraduate premed program, medical school, an internship, and a residency. A person must complete all of these steps before taking specialist board examinations. Usually, in sequential processes, each stage builds on the prior stage. The algebra teacher socializing the student to the world of math, for example, notes that geometry will be easy if the person understands algebra. The geometry teacher, in turn, explains that trigonometry will be painless if the student appreciates geometry. This type of presentation helps recruits stay focused on the current stage. It minimizes the discouragement that comes with the knowledge that they have a long journey to reach the ultimate goal.

At the other end of the second dimension are *random socialization* processes, in which learning experiences have no apparent logic or structure. Steps of the socialization process are unknown, ambiguous, or continually changing. Training for a general manager, for example, tends to be much less rigorously specified than that for a medical professional. Some managers rise from lower ranks, some come from other organizations, and some come straight from business school programs.

Socialization strategies also differ along a third dimension that concerns the amount of help and guidance provided to new members as they learn their new roles. In *serial socialization*, experienced members of the organization teach individuals about the roles they will assume. The more experienced employees serve as role models or mentors for the new members. Observing and discussing issues with these role models is the primary means by which newcomers gather information.<sup>46</sup> In police departments, for example, rookies are assigned as partners to older, veteran officers. Some observers have suggested that this practice creates a remarkable degree of intergenerational stability in the behaviors of police officers. This method of socialization also allows recruits to see into the future—that is, to get a glimpse of their future role. This knowledge can be good or bad, depending on the person doing the socialization. For this reason, organizations need to take great care in assigning mentors to new members.

In *disjunctive socialization*, new members must learn by themselves how to handle a new role. For example, the first woman partner in a conservative law firm may find few people (if any) who have faced her unique problems. She may be completely on her own in coping with the challenges of her new position. Disjunctive socialization is sometimes created when organizations “clean house”—that is, sweep out the older members of the organization and replace them with new personnel. Such a shakeup causes almost all employees of the firm to relearn their roles. Typically the organization hopes that the result will bring more creativity in problem solving, as this kind of move eliminates individuals who might have taught others the established way of doing things.

The fourth dimension of socialization deals with the degree to which a socialization process confirms or denies the value of an individual's personal identity. *Divestiture socialization* ignores or denies the value of the individual's personal characteristics. The organization wants to tear new members down to nothing and then rebuild them as completely new and different individuals. Some organizations require either explicitly or implicitly that recruits sever old relationships, undergo intense harassment from experienced members, and engage in the dirty work of the trade (work that is associated with low pay and low status) for long periods.

In contrast, *investiture socialization* affirms the value to the organization of the recruit's particular personal characteristics. The organization says, in effect, “We like you just the way you are.” It implies that, rather than changing the new member, the organization hopes that the recruit will change the organization. Under these conditions, the organization may try to make the recruit's transition process as smooth and painless as possible.

## Designing Socialization Programs

The strategy employed in designing a socialization program depends on the goals of that program. If the intention is to foster a custodianship response, a group or an organization is best served by a strategy that is collective, sequential, and serial and that involves divestiture. In this way, every socialization recipient will start with the same “clean slate” and receive the same experiences in the same order.

For example, the French Foreign Legion is an organization with a 150-year history of competitive excellence in an industry where success is measured in terms of life and death rather than dollars and cents. Much of its achievement can be attributed to its socialization practices, which clearly aim to instill a custodianship response in new members. The socialization task confronting the Foreign Legion is formidable. Recruits come from more than 100 different countries and must be assembled into a cohesive unit in which members are willing to risk their lives for strangers. Far from being the “cream of the crop,” most applicants are fugitive criminals, ex-convicts, dishonorably discharged members of regular armies, ex-mercenaries, and other men running from their past for some reason.<sup>47</sup>

For this applicant pool, one major attraction of the Foreign Legion is the fact that it is probably the only employer in the world that does not request any formal proof of identification before hiring. Indeed, the first step of the socialization program is to assign new names and nationalities to all recruits. Along with their former identities, most recruits must also say goodbye to their native tongue, because multilingualism is not appreciated. This organization has one official language: French. New recruits are then whisked off to train in exotic locales—the jungles of French Guiana or the deserts of Chad—far from their homes, families, and friends. Their training includes many of the task-specific fighting skills that one would imagine, but the standards for proficiency are much higher than those of NATO armies. Many individuals cannot stand up to the hardships of this training and drop out, leaving only a small core of the most committed members.<sup>48</sup>

While few businesses may want to emulate all of the socialization tactics practiced by the Foreign Legion, its example does offer some lessons for organizations whose socialization goals are to instill change in recruits. Changing recruits into conforming organizational members requires sacrificing old identities and behavior patterns and assuming new identities and behavior patterns. This change is instilled by disconnecting new members from their pasts and challenging them to realize a new future.

If the goal is to not change the individual, but rather to help the individual change the organization, the opposite tactics should be employed. That is, to promote innovation, a group or organization is better served by a strategy that provides a unique and individualized program for each recipient and places value on each recipient’s particular personality, characteristics, and style.<sup>49</sup> In this alternative type of socialization program, individuals need to proactively seek feedback and build relationships, and this is enhanced when they are high on the traits of extroversion and openness to experience.<sup>50</sup> Research indicates that two different types of networks need to be established in building these relationships: first, a small and dense set of relationships with people who work directly with the newcomer; and, second, a broader, more superficial network with people from different departments and levels of the organization. The first network is critical for learning one’s current job and role, and the latter is instrumental for planning for one’s future roles in the organization.<sup>51</sup>

Regardless of its goals and strategies, and the degree to which it allows individuals to proactively socialize themselves, a good socialization program will teach new role occupants about the history, values, people, language, and culture of the group or organization in which membership is sought. If conducted properly, it will enhance the understanding of the person’s role and increase his or her commitment to the organization’s goals.<sup>52</sup>

## Quality of Interpersonal Role Relationships

Given the importance of role relationships within organizations, it is critical to have a framework whereby the quality of these relationships can be judged and enhanced. Equity theory is a theory of social exchange that focuses on the “give and take” of various relationships, such as supervisors and subordinates. It describes the process by which people determine whether they have received fair treatment in their relationships.

### Equity and Social Comparisons

As shown in Figure 8.7, equity theory holds that people make judgments about relational fairness by forming a ratio of their perceived investments (or inputs, *I*) and perceived rewards (or outcomes, *O*). They then compare this ratio to a similar ratio reflecting the perceived costs and benefits of some other reference person. Equity theory does not require that outcomes or inputs be equal for equity to exist. Individuals who receive fewer desirable outcomes than someone else may still feel fairly treated if they see themselves contributing fewer inputs than the other person. Thus, a new entry-level employee may not feel that it is unfair if the CEO is paid more, because there is a corresponding perception that the CEO brings more to the relationship. At some point, however, this ratio may be perceived as getting out of alignment. For example, in 2007, it took a minimum-wage worker all year to make the same amount of money that an average CEO earned in three hours, and this left many wondering if this ratio was fair.<sup>53</sup>

$$\frac{I \text{ person}}{O \text{ person}} = \frac{I \text{ reference person}}{O \text{ reference person}}$$

Figure 8.7 Algebraic Expression of How People Make Equity Comparisons

Table 8.3 lists other possible inputs and outcomes that might be incorporated in equity comparisons in work organizations.

### Distributive, Procedural, and Interactive Justice

Equity theory provides a simple framework for understanding how people decide whether they are being treated fairly in their relationships. Even with this simple framework, however, it can prove difficult to achieve widespread perceptions of justice in organizations for several reasons.

Table 8.3 Inputs and Outcomes in Equity Theory

<i>Inputs</i>	<i>Outcomes</i>
Education	Pay
Intelligence	Satisfying supervision
Experience	Seniority benefits
Training	Fringe benefits
Skill	Status symbols
Social status	Job perquisites
Job effort	Working conditions
Personal appearance	
Health	
Possession of tools	

First, equity judgments are based on individual *perceptions* of inputs and outcomes, and perceptions of the same inputs or outcomes may differ markedly from one person to the next. There can also be cultural differences in how different groups weigh their own inputs and outputs. For example, one study found that people from individualistic cultures like the United States were much more likely to overestimate their own personal inputs (in order to “stand out”) relative to people from collectivist cultures like Japan, where people tend to underestimate their own personal inputs (in order to “blend in”). This can make it very difficult to see eye to eye on what is fair, thus leading to many more impasses and fewer negotiated settlements that are accepted by each side.<sup>54</sup>

Second, it is difficult to predict who will be chosen as the reference person. For example, in our earlier example involving John Thain at Merrill Lynch, he was clearly using CEOs of companies that had fared worse than Merrill Lynch (e.g., Lehman Brothers) as his reference persons when requesting his \$10 million bonus. Thus, he did not perceive the request as unfair. In fact, most compensation committees actually compute a ratio that compares the CEO to the second highest paid employee.<sup>55</sup> This often results in high executive pay cascading down the organization since it is in the best interest of each level of management to pad the salaries of those directly below them.<sup>56</sup> In contrast to either CEOs or executive compensation committees, the average taxpayer uses himself or herself as a reference person when considering CEO salaries, and therefore the average taxpayer found Thain’s request to be outrageously unfair, and many reported this outrage to their representatives in Congress.<sup>57</sup>

Third, in addition to outcomes and inputs, people are keenly sensitive to the procedures through which allocation decisions are made and the manner in which these decisions are communicated. We can distinguish between three kinds of justice perceptions. **Distributional justice** refers to the judgments that people make with respect to the input/outcome ratios they experience relative to the ratios experienced by others with whom they identify (that is, reference persons). The degree to which perceptions of distributional justice translate into the type of anger and resentment that might harm or sever the relationship, however, depends at least partially on perceptions of procedural and interactional justice. In some instances, managers can maintain a perception of fairness and trust even in the face of some pretty negative outcomes, if they carefully manage these “non-distributional” aspects of justice.<sup>58</sup>

Whereas distributive justice focuses on “ends,” procedural justice and interactional justice focus on “means.” If the methods and procedures used to arrive at and implement decisions that affect the employee negatively are seen as fair, the reaction is likely to be much more positive than otherwise.<sup>59</sup> Table 8.4 details the factors that determine whether **procedural justice** will be applied. Even if someone experiences a decision that may harm him or her in an outcome sense (for example, by being passed over for a promotion), the organization can minimize the amount of anger and resentment felt by the employee by focusing on the procedures used to make the decision and showing that they were consistent, unbiased, accurate, correctable, representative, and ethical. For example, most people will react negatively to being laid off by their employer, but research shows that, if the employer can show that the rules followed when making the decisions met these criteria, people will react much less negatively.<sup>60</sup> In other contexts where difficult decisions have to be made, allowing people to participate in the decision-making process may also increase perceptions of procedural justice.<sup>61</sup>

Promoting perceptions of procedural justice among employees is important for a number of other reasons. Workers who feel that organizational procedures are just are much more likely to engage in organizational citizenship behaviors (OCBs) relative to other workers.<sup>62</sup> Indeed, this can have a trickle-down effect in that, if managers experience procedural justice,

**Table 8.4** Six Determinants of Procedural Justice

1. Consistency	The procedures are applied consistently across time and other people
2. Bias suppression	The procedures are applied by a person who has no vested interest in the outcome or prior prejudices regarding the individual
3. Information accuracy	The procedure is based on information that is perceived to be true
4. Correctability	The procedure has built-in safeguards that allow for appealing mistakes or bad decisions
5. Representativeness	The procedure is informed by the concerns of all groups or stakeholders (co-workers, customers, owners) affected by the decision, including the individual who is being harmed
6. Ethicality	The procedure is consistent with prevailing moral standards as they pertain to issues such as invasion of privacy or deception

they will often engage in citizenship behaviors toward their subordinates, who in turn will reciprocate with more OCBs directed toward management—creating a positive, self-reinforcing cycle.<sup>63</sup> This can help establish a climate of procedural justice throughout the work unit, which has been shown to promote group performance and reduce absenteeism.<sup>64</sup> This is especially the case in organizations that are structured in a mechanistic fashion and rely a great deal on formalized rules and procedures to promote coordination.<sup>65</sup>

Whereas procedural justice deals with the manner in which a decision was reached, **interactional justice** focuses on the interpersonal nature of the implementation of the outcomes. Table 8.5 lists the four key determinants of interactional justice. When the decision is explained well and implemented in a fashion that is socially sensitive, considerate, and empathetic, this approach may help diffuse some of the resentment produced by a decision that, in an outcome sense, might be seen as unfair to a particular employee.<sup>66</sup> For example, a manager confronted with the task of laying off a worker would do well to use Table 8.5 as a checklist. Indeed, as one experienced manager notes, when it comes to layoff decisions, “the primary thing we try to do is let them leave with their self-esteem.”<sup>67</sup>

Over time, if a relationship is characterized as being high on all three dimensions of justice, then trust will develop. In a trusting relationship, each member of the exchange has faith in the other, knowing that he or she will be judged fairly and that the other will act in accordance with his or her needs.<sup>68</sup> Developing trust is critical, because it ensures that the two people need not constantly direct their attention and effort at negotiating the short-term inputs and outputs of their relationship. It is especially crucial in today’s decentralized, networked organizations that rely on teams, because trust replaces formal, hierarchical authority as a control mechanism, and hence trust is strongly related to organizational performance in these kinds of contexts.<sup>69</sup>

Instead, in a trusting relationship, people take a long-term focus, where the expectation of fair treatment in the long run precludes the necessity of frequent “equity checks.” People in

**Table 8.5** Four Determinants of Interactional Justice

1. Explanation	Emphasizes aspects of procedural fairness that justify the decision
2. Social sensitivity	Treats the person with dignity and respect
3. Consideration	Listens to the person’s concerns
4. Empathy	Identifies with the person’s feelings

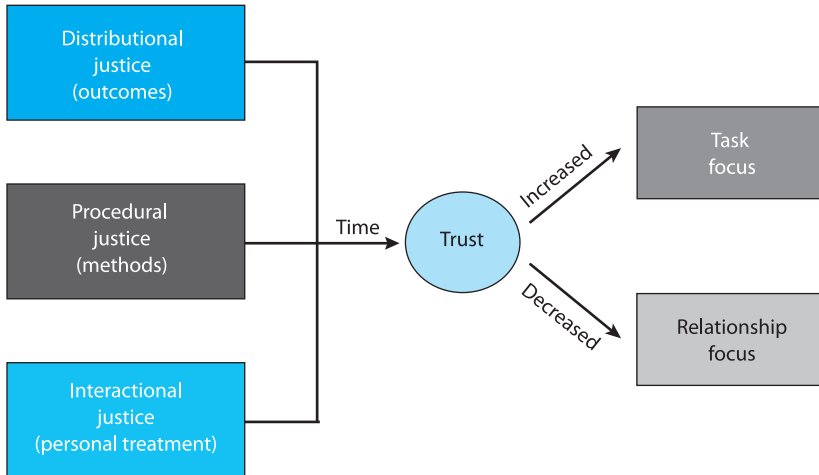


Figure 8.8 The Relationship between Justice, Trust, and Work Outcomes

trusting relationships spend less time and attention on maintaining the relationship, which means that they can direct their effort and attention toward working together productively to meet their interdependence needs. Thus a much stronger relationship between motivation and performance exists in groups characterized by trust.<sup>70</sup> A trusting culture arises where the level of trust is high across all relationships within a group. Groups with this kind of culture show high levels of group cohesion and spontaneous helping behavior relative to low-trust groups.<sup>71</sup> Figure 8.8 depicts the relationships between the three types of justice, trust, and work outcomes.

### Responses to Inequity

Perceptions of inequity create unpleasant emotions. When people feel that they are receiving a greater share of outcomes than they deserve, they may feel guilty. In contrast, perceiving oneself as coming up short in the equity comparison results in anger—a much stronger emotion than guilt. Such anger could make a person want to retaliate against the partner in the relationship, especially if the person is low in agreeableness or negative affectivity.<sup>72</sup> Indeed, the tension associated with inequity may motivate the person to take any of several actions in response.

First, the individual might *alter his or her personal inputs*. For example, in decision-making teams, if one team member perceives that his or her opinion is not being given any weight, he or she may cease contributing to the group's discussion or withhold critical information needed to make a good decision.<sup>73</sup>

A second possible response to inequity is to try to *alter personal outcomes*. For example, individuals who feel that they are relatively underpaid may demand raises or sue their employer for higher pay. For example, an increasingly common type of lawsuit involves workers who claim violations of standard wage and hour laws when they fail to get paid for overtime work. Professional and managerial workers are exempt from this law, but it is not always clear who exactly is a manager or a professional and who is not, and employers paid out over \$1 billion as a result of such suits in 2006 alone.<sup>74</sup> If this kind of legal response is not possible, some employees might even resort to illegal methods to get even with their



employer, and perceptions of injustice have been directly linked to measures of employee theft.<sup>75</sup> Finally, some employees conclude that, if you can't take it with you, you can always break it, and sabotage is an especially likely response to perceived injustice when the individual feels powerless to effect change in any other more legitimate form.<sup>76</sup>

A third way of responding to inequity is to use *cognitive distortion*—that is, to rationalize the results of one's comparisons. For example, people can distort their perceptions of outcomes. In one study, people who were underpaid for a particular task justified this underpayment by stating that their task was more enjoyable than the task performed by people who were overpaid—even though the tasks were identical. This type of overjustification effect has been documented in a number of contexts.<sup>77</sup> Another means of eliminating inequity via cognitive distortion is to change the reference person. A salesperson who brings in less revenue than others in his or her department may claim, "You can't compare me with them because I have a different territory." By this statement, the salesperson seeks to disqualify his or her peers as reference persons.

A fourth way to restore equity is to take some action that will *change the behavior of the reference person*. Workers who, according to their peers, perform too well on piece-rate systems often earn the derogatory title of "rate buster." Research has shown that, if such name calling fails to constrain personal productivity, more direct tactics may be invoked. In one study, researchers coined the term "binging" to refer to a practice in which workers periodically punched suspected rate busters in the arm until they reduced their level of effort.

Finally, if all else fails, equity can be secured by *leaving an inequitable situation*. Turnover and absenteeism are common means of dealing with perceptions of unfairness in the workplace. Although organizations concerned about retention frequently focus on pay and benefits, exit interviews of employees who leave companies often reveal that the driving factor was either a poor relationship between the individual and his or her supervisor or lack of supporting relationships among co-workers.<sup>78</sup>

### Managing Inequitable Situations

In a perfect world, managers would be able to ensure that every employee felt equitably treated at all times. Given the wide variety of inputs and outputs that employees might consider relevant and the many reference people who might be called on in comparisons, however, there will inevitably be situations in which the manager is confronted with an employee who is angry and feels that he or she has been treated unfairly. In these circumstances, the manager's first step should be to try to change the actual source of the inequity. For example, the manager might seek to increase the outcomes the aggrieved individual receives (for example, through a pay raise) or decrease the inputs that the aggrieved individual must contribute (for example, by reduced responsibilities).

For example, at McDonald's restaurant chain, the difference in revenue between one of their top managers and their average manager is roughly \$200,000 a year. Unfortunately, these top managers also have the best alternative employment opportunities, and thus their turnover rate is quite high, bordering on 50 percent. In order to prevent these managers from terminating their relationship with the company, the human resource department created a new retirement program in 2008 that boosted savings for this group. McDonald's basically agreed to double any 401(k) savings for these managers. That is, if a manager put \$5,000 into a 401(k) plan, McDonald's would double that with a \$10,000 donation. This program helped build loyalty and resulted in a reduction of turnover of over 33 percent.<sup>79</sup>

If true change cannot be initiated, the manager's second step might be to change the aggrieved person's perceptions of the situation, by persuading the worker to focus on

outcomes of which he or she might be unaware (for example, the added chances of being promoted given those responsibilities) or inputs the worker takes for granted (for example, not being asked to travel or work weekends). The manager can also try to switch the reference person being utilized by the aggrieved individual to someone in an even worse position (for example, by noting how many people with similar jobs have been laid off).

As a last resort, if a manager cannot change either the conditions or the perceptions of the angry individual, he or she may be left with only excuses and apologies. With an excuse, the manager basically admits that the person was treated unfairly, but implies that the problem was beyond the manager's control. With an apology, the manager admits both harm and responsibility, but shows remorse and denies that the inequity is truly representative of the past and future of the relationship. A successful apology is usually accompanied by some form of compensation that, at least symbolically, restores equity in the relationship. In today's increasingly litigious society, these kinds of apologies are increasingly rare, since they may be seen as an admission of guilt by parties who may be interested in suing their employer. This is unfortunate because a good sincere apology is often a cheap, fast, and effective way to eliminate the problems caused with a specific perceived injustice, and it has been shown to actually result in reduced lawsuits.<sup>80</sup>

For example, Joette Schmidt, vice president of America West Airlines, went on the *Today* show and was confronted with a passenger, Sheryl Cole, who was thrown off a recent America West flight for making a joke about security. Instead of trying to defend the company, Schmidt looked directly into the camera and stated, "I'm here primarily to apologize to Ms. Cole. We overreacted." Cole, who had spent her first few minutes on camera harshly criticizing the airline, was visibly caught off guard, and immediately softened her stance, responding, "I appreciate the apology, and I am sympathetic to America West right now, knowing that they are going through a tough time."<sup>81</sup> This shows the power of simple apologies to restore equity in relationships that have been damaged. The three main goals that one has to accomplish to restore a damaged relationship are to reduce negative affect, restore a positive exchange, and then slowly rebuild trust, all of which can be triggered by a good sincere apology.<sup>82</sup>

If nothing else, a good apology shows that the two sides of the relationship see things the same way, and legitimizes the world view of the offended party. Indeed, returning to our opening example of John Thain at Merrill Lynch, as we noted there, he never felt his request for the \$10 million bonus was unfair, and hence he never apologized for the request. In fact, months later, immediately prior to the Bank of America takeover, he pushed through a series of secret, last-minute bonuses for other Merrill Lynch executives totaling over \$15 million. This was the last straw, and Bank of America forced him to resign. As one Bank of America executive noted, "John Thain was just completely tone-deaf to the culture of Bank of America, and it was hard to see him and Ken Lewis [CEO of Bank of America] in a working relationship."<sup>83</sup>

## Summary

This chapter discussed the three key ingredients of all interpersonal relations: interdependence, roles, and communication. Different types of interdependence form among people who are joined together in interpersonal relations. *Pooled interdependence* is the simplest of these forms; increasingly more complex forms are *sequential*, *reciprocal*, and *comprehensive interdependence*. *Roles* form among interdependent individuals to guide their behaviors as they interact with one another. They capture the expectations that members of a *role set* have for the person occupying a given work role. Roles can be differentiated along

*functional, hierarchical, and inclusionary* dimensions. *Socialization* is the process through which individuals learn about their roles. Depending on the goal of socialization, different communicators, using different tactics, may be required to strengthen *custodianship* or *innovation* expectations. Just as socialized roles form the building blocks of interpersonal relations, *communication* is the cement that holds these blocks together. It involves the encoding, transmission, and decoding of information sent from one person to another via a communication medium. Equity theory is a theoretical framework that helps explain how people judge the fairness of their relationships. This theory provides a great deal of practical guidance in terms of managing perceptions of *distributional, procedural, and interactional justice*.

## Review Questions

1. Of the four types of interdependence discussed in this chapter, which type is most adversely affected by turnover among organizational members? Which type of interdependence is most adversely affected by turnover in group leadership? How might the nature of the turnover process affect the kind of interdependence built into groups?
2. Socialization refers to the effect that the group or organization has on the individual. This effect tends to be greatest when the individual is moving through more than one dimension simultaneously (for example, functional and hierarchical). In contrast, when is the individual most likely to have the greatest effect on the organization? (Are there honeymoon periods? Do lame ducks have any influence?) How might your answer depend on the tactics of socialization initially employed to bring the individual into the group or organization?
3. What role do ceremonies play in the socialization process of someone crossing an important organizational boundary? In terms of the three kinds of boundaries that a person can traverse, where are ceremonies most frequently encountered, and why? What role do ceremonies play in the motivation of group members who are not crossing a boundary but are merely observers at the affair?
4. In communication, it has been said that “the medium is the message.” What factors should be considered when choosing a medium for one’s communication? Some of the greatest leaders of all time actually wrote very little. What might explain why people who are perceived as strong leaders avoid leaving a paper trail? When might writing be used to enhance leadership?
5. According to equity theory, how do people judge whether they have been treated fairly? What effects can these judgments have on workplace performance? How can these effects be managed?

# Group Dynamics and Team Effectiveness

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One person called him “naive.” Another person called him “dangerously inexperienced.” Yet another person worked for his opponent for the previous three years. What these three people all had in common, however, was that they were chosen by Barack Obama to be part of his leadership team when he became president in 2009. These people, of course, would be Joe Biden, Hillary Clinton, and Robert Gates respectively, and their selection onto the Team Obama reflected his approach of developing a “team of rivals” similar to that of his hero, Abraham Lincoln.<sup>1</sup> Lincoln, Obama had once said, “was confident enough to be willing to have these dissenting voices and confident enough to listen to the American people and to push them outside of their comfort zone.”<sup>2</sup> This was a stark contrast to the approach taken by his predecessor, George W. Bush, who for the most part filled his team with loyalists, friends, and people whom he had worked closely with when he was governor of Texas.

Indeed, as a political aide to his father, George W. Bush was exposed to a model of the U.S. presidency that was characterized by a diverse and wide circle of influence, as well as inclusive attitude toward staffing important decision-making groups. Prior to and during the first Gulf War, George H. Bush invited congressional representatives from both political parties to the White House, as well as foreign dignitaries, to discuss strategy. In the words of Congressman Jack Murtha, “George H. would listen to all the bitching from everybody, Republicans and Democrats, and then he would do what he thought was right.”<sup>3</sup> However, creating such a large and diverse set of inner-circle members with different ideas constantly set people up as winners and losers, often with little loyalty to the president or his eventual policies. In fact, the George H. Bush administration was recognized as perhaps the worst ever in terms of managing leaks and internal squabbling about major policy issues (such as raising taxes), as well as backstabbing within the ranks.

Thus, many considered this move on Obama’s part to be a very risky move. On the one hand, by surrounding himself with a team of strong-minded, independent thinkers who would not necessarily act as simple “yes men,” he assured himself that he would get a great deal of unbiased and unique thoughts on every conceivable challenge to his administration. On the other hand, could he really count on these individuals to faithfully execute the decisions that he made, especially when one of those decisions was, perhaps, inconsistent with the advice that he was offered?<sup>4</sup> In the end, Obama concluded that this risk was worth it, believing that the most important quality that all of those on his team shared was that they were practically minded, rather than ideologically minded, individuals who get the job done. Some suggested that what Obama was doing was nothing less than creating a new “post-partisan era” in government, where flexibility and effectiveness, rather than ideological consistency and loyalty, were the driving factors in the team-building process.<sup>5</sup>

As was the case with Lincoln, history will judge whether this approach to team building would be as successful today as it was in the 19th century, but for our purposes it illustrates some of the critical issues associated with creating and managing teams. A single person working alone cannot accomplish very much, and the relative success of the human species on this planet can be traced in large part to the ability of people to work together and coordinate their efforts in a way that is qualitatively different from the ways of other species. Contemporary organizations are recognizing the power of work teams, and are increasingly structuring themselves around flexible project teams that are temporally bound rather than fixed, individual jobs that exist in isolation on the organization chart.

Clearly, team building is a very popular trend in contemporary organizations both large and small.<sup>6</sup> However, as team building gains greater favor in organizations (some might call it a fad), managers need to keep in mind that teams are often the solution to one set of problems, but the source of a second set of problems. Indeed, many organizations currently list the inability to find people with good teamwork skills as one of their most difficult challenges.<sup>7</sup> Thus, this chapter discusses the management of group and team performance. We begin by examining how groups are formally constituted in organizations and by exploring the processes within groups that give rise to a sense of group identity and purpose. After laying this groundwork, we identify several critical factors that can influence the decision to have individuals work alone or work in groups. Next, we identify the special type of group called a team, discussing how to “set the stage” and then “manage the process” so as to derive the benefits of teamwork while avoiding some of the potential pitfalls associated with teams. The ability to understand and execute a role within a team seems to be a skill that has value across many different organizations and career stages.<sup>8</sup> Developing this skill is the aim of this chapter.

## Formation and Development of Groups

A *group* is a collection of two or more people who interact with one another in a way such that each person influences and is influenced by the others.<sup>9</sup> The members of a group draw important psychological distinctions between themselves and people who are not group members. For example, in our opening story on Team Obama, one of the most controversial aspects of putting his team together was the decision regarding who would and would not be in the group. Since group membership says a great deal about who the group really is, in many groups membership is often granted very selectively and, in some cases, the higher the selectivity, the stronger the psychological identification with the group. Generally, group members share ten characteristics:

1. They define themselves as members.
2. They are defined by others as members.
3. They identify with one another.
4. They engage in frequent interaction.
5. They participate in a system of interlocking roles.
6. They share common norms.
7. They pursue shared, interdependent goals.
8. They feel that their membership in the group is rewarding.
9. They have a collective perception of unity.
10. They stick together in any confrontation with other groups.<sup>10</sup>

These distinctions provide the group with boundaries and a sense of permanence. They lend it a distinct identity and separate it from other people and other groups. They also contribute

to **group effectiveness**, the ultimate aim of group activities. A group is effective when it satisfies three important criteria:

1. *Production output.* The product of the group's work must meet or exceed standards of quantity and quality defined by the organization. *Group productivity* is a measure of this product, and the speed with which fast-forming groups can accomplish their objectives is becoming ever more critical.<sup>11</sup>
2. *Member satisfaction.* Membership in the group must provide people with short-term satisfaction and facilitate their long-term growth and development. If it does not, members will leave and the group will cease to exist. Furthermore, because how people feel about the group tends to be contagious, dissatisfaction with the group can spread quickly if it is not managed appropriately.<sup>12</sup>
3. *Capacity for continued cooperation and adaptation.* The interpersonal processes that the group uses to complete a task should maintain or enhance members' capacity to work together and adapt over time. Groups that are not able to learn from their experiences and adapt and cooperate flexibly over time cannot remain viable.<sup>13</sup>

Thus, an effective group is able to satisfy immediate demands for performance and member satisfaction, while making provisions for long-term survival learning, and adaptation. These three criteria are all slightly different from each other, and in some cases a manager needs to be careful not to promote one goal in the short term (productivity) and unwittingly harm another one in the long term (long-term continuity). Over the long term, the three tend to come together, however, and teams develop a form of "implicit coordination" where a high level of collaboration effectiveness can be achieved with a minimum amount of communication, misunderstandings, or conflict.<sup>14</sup> For example, a recent study of basketball teams in the National Basketball Association showed that the longer a group stayed together the better they performed, because team members were better able to learn and exploit subtle differences in each player's strengths and weaknesses. This kind of "tacit knowledge" did not develop in teams that were constantly changing their membership, and this put them at a severe competitive disadvantage.<sup>15</sup>

### Group Formation

In most organizations, groups are formed based on similarities either in what people do or in what they make.<sup>16</sup> To illustrate these two contrasting approaches to **group formation**, imagine a company that makes wooden desks, bookshelves, and chairs. To produce each product, four basic activities are required:

1. A receiver must unpack and stock the raw materials required for the product.
2. A fabricator must shape and assemble the raw materials into a partially completed product.
3. A finisher must complete the assembly operation by painting and packaging the product.
4. A shipper must dispatch the finished products to the organization's customers.

Also imagine that the company's manufacturing workforce consists of 12 employees, who are organized into three assembly lines consisting of four employees each. One employee on each line performs each of the four basic work activities. The company must decide whether to group the 12 employees by the tasks they perform, called **functional grouping**, or by the flow of work from initiation to completion, called **work flow grouping**. Each alternative

offers significant advantages and disadvantages. Consider first what functional grouping, or grouping by the means of production, can offer the firm. The upper panel of Figure 9.1 shows how the four tasks from each assembly line can be grouped together so that the four resulting work groups consist of people with the same sets of abilities, knowledge, and skills.

Functional work groups help integrate and coordinate employees who perform similar tasks. Employees in such groups can exchange information about task procedures, sharpening their knowledge and skills. They can also help one another out when necessary. This sort of cooperation can greatly enhance productivity. In addition, functional grouping can allow the organization to take advantage of other cost savings. Suppose that the receivers for all three assembly lines in Figure 9.1 need only five hours per day to complete their work; they remain idle for the remaining three hours. If receiving is handled in a single work group, the firm can economize by employing two receivers instead of three. The third receiver can be moved elsewhere in the company to perform a more productive job, and the company can derive substantial benefit from improved efficiency in the use of human resources.

On the negative side, functional grouping separates people performing different tasks along the same flow of work. This differentiation can encourage slowdowns that block the flow, thereby reducing productivity. For instance, suppose the finisher on the desk assembly line has nothing to do and wants the desk fabricator to speed up so as to provide more work. Because of functional grouping, the two people are members of different groups, and no simple way exists for them to communicate with each other directly.

Instead, the desk finisher must rely on hierarchical communication linkages between the fabricating and finishing groups. The finisher must tell the supervisor of the finishing group about the problem. The finishing supervisor must notify the superintendent overseeing all

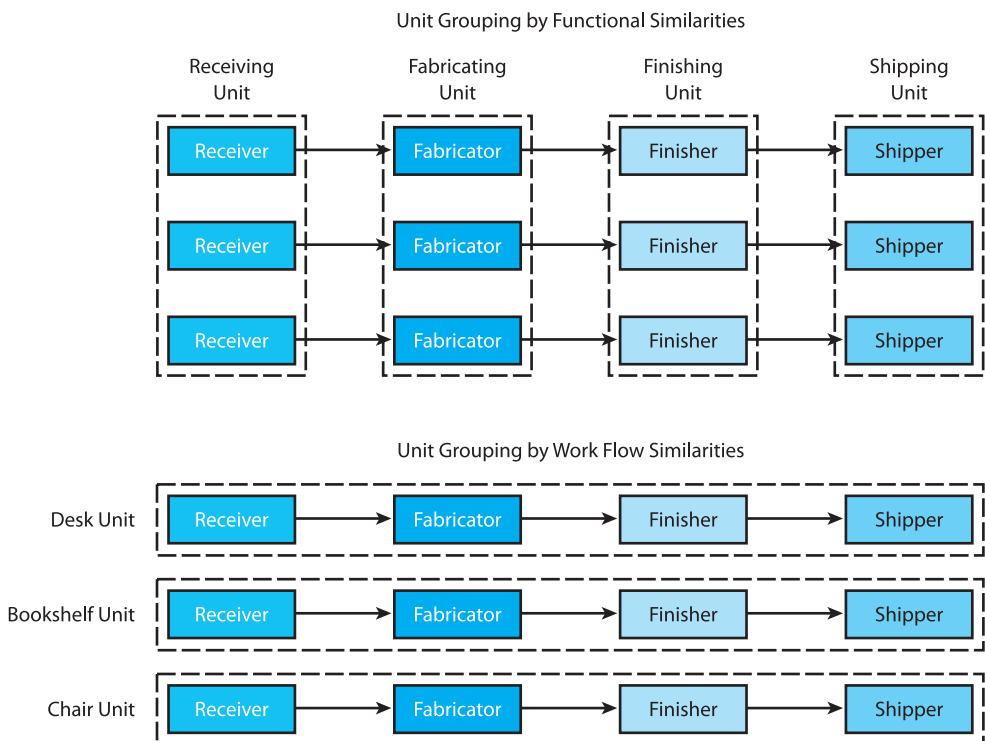


Figure 9.1 Group Formation by Function or Work Flow

manufacturing operations. The manufacturing superintendent must talk with the supervisor of the fabricating group. Finally, the fabricating supervisor must tell the desk fabricator to work more quickly. Meanwhile, productivity suffers because of the absence of direct communication along the flow of work created by these “functional silos.”

Now consider what happens if work groups are created on the basis of work flow. In the furniture company example, a different flow of work is associated with each of its three product lines (desks, bookshelves, and chairs). The lower panel of Figure 9.1 illustrates the results of choosing this approach. The primary strengths of work flow grouping relate to the fact that this approach integrates all activities required to manufacture a product or provide a service. Each separate work flow is completely enclosed within a single group. If employees who fill different functions along the assembly line need to coordinate with each other to maintain the flow of work, they can do so without difficulty.

Owing to its encouragement of integration, work flow grouping also enhances organizational adaptability. Operations on any of the furniture company’s three assembly lines can be halted or stopped without affecting the rest of the company. Suppose, for example, that the desk assembly line in the company is shut down because of poor sales. To simulate this situation, cover the upper assembly line in the bottom panel of Figure 9.1 with a piece of paper. You can see that neither of the remaining two groups will be affected in any major way. Under functional grouping, however, the firm would not enjoy the same degree of flexibility. If you cover the upper assembly line in the top panel of Figure 9.1, you will note that all four of the groups created by functional grouping would be affected by the interruption in desk production.

A recent example of this can be seen when Vikram Pandit took over as the new CEO at Citigroup in 2008. In order to speed up decision making and flexibility, Pandit broke down his functional silos and created semiautonomous teams for different regions of the country. His regional managers became “mini-CEOs” who did not have to get all their ideas for new products or personnel practices approved by central headquarters. As Pandit noted, “taking this approach makes sense because change is occurring so rapidly in today’s world that the old command-and-control mentality doesn’t work.”<sup>17</sup>

Despite its strengths, however, work flow grouping does not permit the scale economies associated with functional grouping. In work flow grouping, people who perform the same function cannot help or substitute for one another. In addition, they will inevitably duplicate one another’s work, adding to the firm’s overall costs. For example, at Citigroup, two different autonomous managers could both conduct a salary survey separately, when for efficiency reasons one survey might have met the needs of both. Moreover, it becomes very difficult for people who perform the same task to trade information about issues such as more efficient work procedures and ways to improve task skills.

Just as functional grouping does not allow the adaptability of work flow grouping, work flow grouping does not produce the economic efficiency of functional grouping. The alternative structures also place different demands on managers, in the sense that managing a unit grouped around work flow is often a more complex job where the manager has a high degree of autonomy, whereas the manager of a unit grouped around functional similarity has a simpler task but one where the manager is more interdependent on other managers. For this reason, managers of groups organized around work flow often need to be higher in cognitive ability than managers of groups organized around functional similarities.<sup>18</sup> Thus, although many different types of groups are possible, each type inevitably has its own set of strengths and weaknesses.



## Group Development

In most organizations, choices between functional and work flow grouping are made by managers who must decide whether efficiency or adaptability should be given a higher priority. Group formation is, therefore, a process of determining the formal, established characteristics of groups. A second process, *group development*, allows informal aspects of groups to emerge. As groups develop, members modify formally prescribed group tasks, clarify personal roles, and negotiate group norms. Research indicates that these developmental processes tend to advance through the four stages shown in Figure 9.2: initiation, differentiation, integration, and maturity.<sup>19</sup>

The first stage of group development, **initiation**, is characterized by uncertainty and anxiety. Potential members focus on getting to know each other's personal views and abilities. In the beginning, they often discuss neutral topics that have little bearing on the group's purpose, such as the weather and local news. As they gain familiarity with one another and begin to feel more comfortable, members begin discussing general work issues and each person's likely relationship to the formally prescribed task of the group. Attention now concentrates on determining which behaviors should be considered appropriate and what sorts of contributions people should be expected to make to the group. As ideas are exchanged and discussed, people who have the option may decide whether to join or leave the group.

When a group enters the second stage of development, **differentiation**, conflicts may erupt as members try to reach agreement on the purpose, goals, and objectives of the group. Strong differences of opinion may emerge as members try to achieve consensus on exactly how they will accomplish the group's formally prescribed task. Sorting out who will do what when, where, why, and how and what reward members will receive for their performance often proves to be extremely difficult. Sometimes disagreements about members' roles in the group become violent enough to threaten the group's very existence. If successful, however, differentiation creates a structure of roles and norms that allows the group to accomplish missions that its members could not accomplish by working alone.

Having weathered the differentiation stage, group members must resolve conflicts over other crucial issues in the third stage of group development, **integration**. Integration focuses on reestablishing the central purpose of the group in light of the structure of roles developed during differentiation. Members may define the task of the group in informal terms that modify the group's formal purpose and reflect their own experiences and opinions. Reaching a consensus about the group's purpose helps develop a sense of group identity among

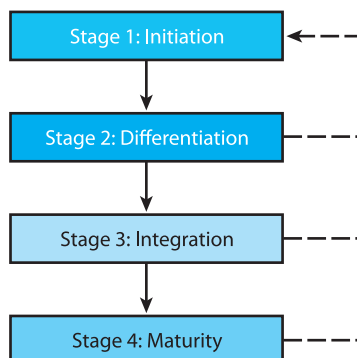


Figure 9.2 Stages in Group Development

members and promotes cohesiveness within the group. It also provides the foundation for the development of additional rules, norms, and procedures to help coordinate interactions among members and facilitate the pursuit of group goals. Many groups tend to hit this stage near the halfway point of a project, and this has been referred to as a point of **punctuated equilibrium**. The halfway point is significant because it is easy for the group members to estimate their final progress by simply multiplying what they have accomplished at the point by two. In most cases this projection creates anxiety, and causes an abrupt change in the group's motivation and willingness to compromise with others, and thus helps accelerate the group's move to stage four.<sup>20</sup>

In the final stage of group development, **maturity**, members fulfill their roles and work toward attaining group goals. Many of the agreements reached about goals, roles, and norms may take on formal significance, being adopted by management and documented in writing. Formalizing these agreements helps to ensure that people joining the group at this stage will understand the group's purpose and way of functioning. Even at this late stage, a group may be confronted with new tasks or new requirements for performance. Changes in the group's environment or in its members may make it necessary to return to an earlier stage and reenter the development process. Thus group development is a dynamic, continuous process in which informal understandings support or sometimes displace the formal characteristics of the group and its task.

Not every group passes through all four stages of development in a predictable, stepwise manner, and there is a great deal of variability in how fast this process proceeds for different groups, which of course has implications for competitive advantage. For example, to speed up this process, IBM created an "innovation portal," which was essentially a glorified chat room, where any employee with a new idea could recruit new team members and line up other resources for launching some new product. Armed with this technology, an IBM project leader can build a global team in less than an hour, and develop a prototype in 30 days, which compares to an average of six months prior to the introduction of the portal. After just one year in operation, the portal had attracted contributions from over 90,000 would-be innovators, and was attributed to helping to develop ten new products, all of which eventually turned a profit.<sup>21</sup>

In addition to the provision of technology, several other steps can be taken to help speed the developmental process of teams so that they reach the maturity stage as fast as possible. First, most teams go through discernible cycles or performance episodes that are marked by goal-setting, planning, task execution, and feedback/reflection cycles. In many cases, there are time-cycle trade-offs such that the more cycles a group goes through the faster it develops. Thus a group that does four small projects over the course of a year develops faster than a group that does one 12-month project.<sup>22</sup> Second, distributing power equally in the group so that one person does not dominate decision making also seems to speed development. Having to form consensus or win a group vote creates a context conducive to information sharing and debate that can be stifled by autocratic leadership.<sup>23</sup> Third, group-based rewards where everyone receives the same bonus for successful group accomplishment also seem to engage people more actively in teamwork, giving everyone an equal stake in the team's outcome.<sup>24</sup> Finally, stress seems to trigger individualistic orientations and decision making and hence, to the extent that new teams can be shielded from a great deal of stress, can also help promote faster development to maturity.<sup>25</sup>

## Group versus Individual Productivity

Are people necessarily more productive when they work in groups than when they work alone? Based on the growing prevalence of groups and teams in organizations, it appears that many people believe the answer to this question is “yes.” However, a large body of research indicates that groups of individuals working together are sometimes less productive than the same number of people working alone.<sup>26</sup> Although teams often bring more information to bear on problem solving, much of this knowledge often fails to manifest itself in the team’s deliberations.<sup>27</sup> Second, although groups are often able to come up with more creative ideas relative to individuals, this is usually only the case when the members have worked together for an extended time period. Groups of strangers rarely produce creative or innovative ideas.<sup>28</sup> Instead, it seems that, although there are some trade-offs, members of groups need to have a great deal of familiarity both with the task and with the team to achieve high levels of success.<sup>29</sup>

Finally, it often takes longer to make decisions in a group—especially if one must arrive at consensus. For example, many have blamed Sony’s inability to match Apple in terms of speed of introducing new products with Sony’s culture and the stress they place on developing consensus at all levels prior to the introduction of a new product or process. In fact, when Ty Roberts was recruited away from Apple to Sony, he struggled to introduce change even though that was what he was explicitly recruited to do. He noted that “Sony is not like Apple. You can’t just tell people to do something. It’s all about building consensus here, and is often a slow and difficult process where one person or department can bring decision-making to a halt.”<sup>30</sup>

### Process Loss

Adding more people to a group increases the human resources that the group can put to productive use. Thus, as depicted in Figure 9.3, the *theoretical* productivity of a group should rise in direct proportion to the size of the group. In reality, after an initial rise, the group’s *actual productivity* falls as its size continues to increase. The difference between what a group actually produces and what it might theoretically produce constitutes **process loss**.<sup>31</sup> Process loss results from the existence of obstacles to group productivity, the most influential of which are production blocking, group-maintenance activities, and social loafing.

**Production blocking** occurs when people get in each other’s way as they try to perform a group task—for example, when one member of a moving-van crew carries a chair through a doorway and another member waits to carry a box of clothing through the same doorway. In large groups, one form of production blocking is caused by the fact that only one person can effectively talk at once, and in this context it may be difficult for some members to get their ideas discussed. Good ideas may never be introduced simply because of this limitation.

In addition, for a group to function effectively over time, its members must fulfill the requirements of several **group-maintenance roles**. Each of these roles helps to ensure the group’s continued existence by building and preserving strong interpersonal relations among its members. These roles include the following:

- *encouragers*, who enhance feelings of warmth and solidarity within the group by praising, agreeing with, and accepting the ideas of others
- *harmonizers*, who attempt to minimize the negative effects of conflicts among the group’s members by resolving disagreements fairly, quickly, and openly and by relieving interpersonal tension

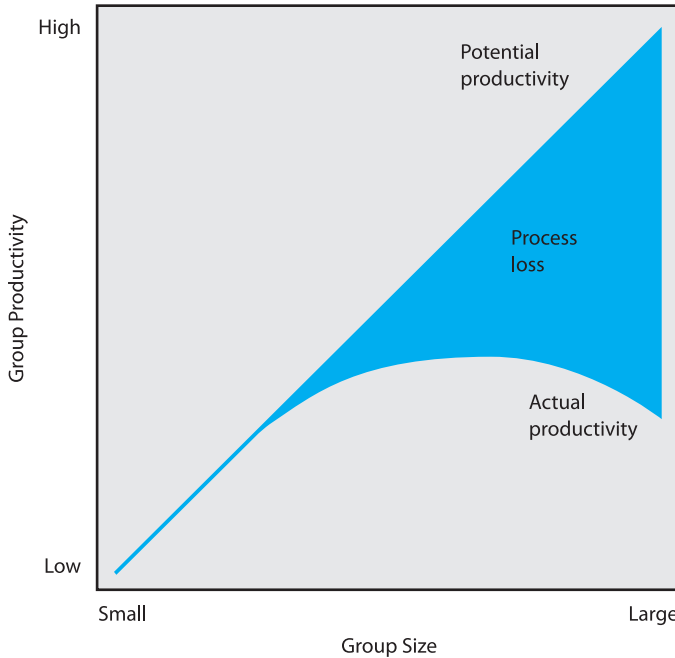


Figure 9.3 Group Size and Process Loss

- *standard setters*, who raise questions about group goals and goal attainment and who set achievement standards against which group members can evaluate their performance.<sup>32</sup>

Although group-maintenance activities support and facilitate a group's continued functioning, they can also interfere with productive activity. For instance, members of a management team who disagree about a proposal must spend time not only on improving the proposal but also on harmonizing among themselves, diverting valuable time and effort and reducing the group's productivity.

Process loss can also result from **social loafing**, the choice by some members of a group to take advantage of others by doing less work, working more slowly, or in other ways decreasing their own contributions to group productivity.<sup>33</sup> According to economists, social loafing—also called *free riding*—makes sense from a loafer's perspective if the rewards that his or her group receives for productivity are shared more or less equally among all group members. A loafer can gain the same rewards bestowed on everyone else without having to expend personal effort.

Unless someone else in the group takes up the slack, even one person's loafing may lower the entire group's productivity. In the worst-case scenario, the other team members who witness the social loafer may feel that they are being taken advantage of, and then begin to reduce their level of effort as well. If this happens, the group as a whole begins to look more and more like its worst member, and unless this is managed it creates a huge amount of process loss.<sup>34</sup> Social loafing can be prevented in a number of different ways, but two central practices are to make sure that each person's contribution to the group is both identifiable (so they feel accountable) and unique (so they feel indispensable).<sup>35</sup>

## Group Synergy

Whereas process loss focuses on the reduction of productivity attributed to putting people into groups as opposed to leaving them alone, the concept of **group synergy** deals with the opposite phenomenon—productivity of a group that exceeds the expectation, based on the potential individual contributions. Figure 9.4 shows the relationship between group productivity and group size under conditions of group synergy.

Although process loss is the more common outcome, group synergy is possible, and much of the remainder of this chapter is devoted to identifying those conditions where synergy happens more frequently. Indeed, for each of the three factors that can cause process loss, a corresponding factor exists that might be able to account for group synergy. For example, whereas in production blocking individuals get in one another's way, **social facilitation** may allow the presence of others to increase an individual's performance.

The presence of others can be facilitating for a number of reasons. Perhaps most important, in a group context, one person who is unskilled or inexperienced can model his or her behavior on the behavior of others in the group who are more skilled and experienced. For example, research shows that teams that are composed of new and old members are particularly powerful because of the ability of older members to transfer their knowledge and experience quickly to new members, who would take years to learn many aspects of the work on their own. In return, new members can help their older counterparts with introducing new ideas and technologies to the work.<sup>36</sup> A real-world example of this can be seen at Randstad, a New York-based employment agency that systematically pairs workers in their 20s with workers in their 50s and 60s. These two-member teams work together with their desks facing one another, hence creating a very intense shared experience for each person.<sup>37</sup>

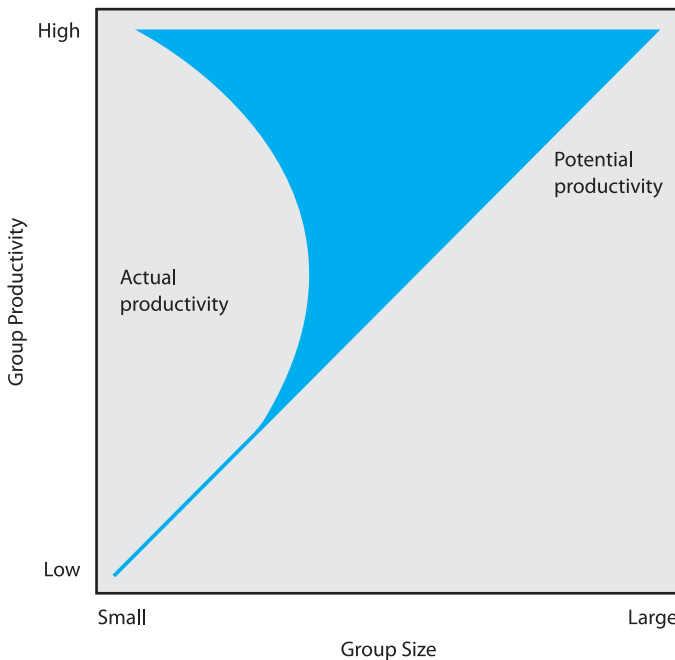


Figure 9.4 Group Size and Synergy

Similarly, although it takes time to build and maintain interpersonal relationships in the group, under many conditions the presence of close interpersonal relationships will promote helping behaviors, where one member of the team takes over some of the workload of another member who might be overwhelmed at that moment in time. Although not part of anyone's formal job description, this type of helping behavior is essential when there are unpredictable and uneven workloads.<sup>38</sup> The key, however, is to make sure that the right people are receiving the help they need, because sometimes, left on their own, people have a tendency to help those who are most able to help them in return, and not necessarily those who actually need the most help.<sup>39</sup>

Finally, although some people will respond to working in groups by social loafing, the within-group competition aspect of group tasks motivates other people to work harder than they would have if left on their own. Research shows that some amount of within-group competition can increase the speed of individual members, and that this effect is particularly pronounced on the group's worst member (the potential social loafer).<sup>40</sup> Indeed, some tasks may be so boring or monotonous that the only way to inspire workers is by creating a competition out of the situation. Although this type of within-group competition must be monitored so that it does not interfere with larger group goals, the fact that it can work in certain situations shows that forming groups can increase or decrease individuals' efforts.

### Groups versus Teams

Although the previous sections make it clear that it is not always beneficial to form groups or teams, under some circumstances one has no alternative. To understand these circumstances, it is worth drawing a distinction between work groups and teams, because the choice to form groups is often more discretionary than the decision to form teams.

**Teams** are a special subset of groups. They share all ten characteristics of groups noted earlier in the chapter, plus three additional distinguishing features:

1. The members of teams are highly interdependent, typically being connected via comprehensive interdependence (recall Chapter 8's discussion of the types of interdependence).
2. Teams are formed using work flow grouping, so the members of a team are responsible for performing several functions.
3. Skills, knowledge, expertise, and information are often distributed unequally among the members of a team, owing to differences in their backgrounds, training, abilities, and access to resources. Thus the members are not interchangeable.

The last feature on this list explains why managers often have less discretion when forming teams than when creating groups. Specifically, some tasks are so large and require so many different skills that no single individual could perform them by working alone. Any type of complex surgery, for example, requires at least a surgeon, an anesthesiologist, and a surgical nurse. In this instance, it makes no sense to question whether those three individuals could perform more operations working alone versus working together. The skill set required of each person is so complex that no person could perform an operation by himself or herself.

These team-based structures offer two primary advantages over traditional hierarchical structures. First, they enable organizations to bring products to market faster than would be possible in systems in which experts work sequentially—for instance, designers handing over drawings to engineers, who then hand over specifications to manufacturers, who then deliver a product to marketers. If the designers envision a project that will be too difficult to produce

or too challenging to market, this problem is spotted early by teams, when it is easier to rectify. This kind of quick self-correction is particularly likely to occur when customers are recruited to play a role in the team. For example, Xerox routinely places customers on project development teams, and the unique and important perspective brought by these team members has been directly attributed to many innovations, including the first “two-engine” copier, which allows people to still make copies even when one of the machine’s engines is down and being serviced. Sales for the new two-engine copiers have been very high, and were jump-started by the fact that virtually every customer who worked on the team eventually bought some of the machines for their own company.<sup>41</sup>

Second, team-based structures eliminate the need for having multiple levels of middle management, giving workers autonomy over decisions that were previously the province of managers. Autonomy has a powerful, positive effect on workforce motivation, as indicated in Chapter 5, and trimming the number of managers reduces administrative overhead.<sup>42</sup> Indeed, when autonomous team-based structures are combined with the motivational force of employee ownership, firms can gain a great deal of competitive advantage over their traditionally structured rivals. For example, W. L. Gore, maker of Gore-Tex waterproof fabric, has no fixed hierarchy, no fixed job titles, and no formal job descriptions. Instead, this employee-owned company is organized around flexible teams that move from project to project depending on the swings in demand for various products. This flexibility means the firm can produce more fabric than its competitors with fewer people, and the saved labor costs are then reinvested in the company, increasing its value for the employee owners.<sup>43</sup>

Of course, to derive this sort of benefit from teams, the organization must avoid the types of problems that can arise in group or team contexts. For example, as we noted earlier, it is critical that the right people are brought into the team, because this will create interdependence among the group members, who can be harmed by others who may lack conscientiousness or integrity. For example, New Balance Shoes created a partnership with a Chinese company that was supposed to help the U.S. sneaker manufacturer increase production. After learning the secrets of the New Balance manufacturing process, however, the Chinese company began producing lower-priced clones of New Balance shoes that they sold on the world market for half the price—drastically cutting into New Balance’s profit margins.<sup>44</sup> Similar horror stories of firms that entered into teams where they were subsequently ripped off by their supposed team members are not uncommon, and show again that teams can help or hurt competitiveness, depending upon how they are managed.<sup>45</sup> The remainder of this chapter will focus on ways to maximize group and team effectiveness.

## Keys to Team Effectiveness: Setting the Stage

### Task Structure

In the initial stage of group formation, a decision must be made with respect to whether the group will employ functional grouping or work flow grouping (reexamine Figure 9.1). This decision is important because it is a primary determinant of how much task interdependence the group will experience. Task interdependence refers to the degree to which team members interact cooperatively and work interactively to complete tasks. The level of task interdependence is related to performance on both cognitive and behavioral tasks as well as commitment to the team.<sup>46</sup> In addition, task interdependence also has implications for how teams react to losing a member, in the sense that turnover is more disruptive when task interdependence is high.<sup>47</sup>

When task interdependence is high, two other aspects of structuring the team can promote

coordination and performance. First, structures that rotate members through different roles via cross-training help create shared mental models among team members, which in turn promotes coordination and mutual support.<sup>48</sup> Indeed, this kind of “within-person” functional diversity (where one person has varied experiences) seems to be even more important than “cross-unit” functional diversity (where different people each bring a unique experience) in terms of promoting effective team performance.<sup>49</sup> Second, in self-managed teams, rotating the leadership position is also instrumental in promoting cooperation and participation among members, because all team members get a “big picture” appreciation of how all the parts sum to the whole.<sup>50</sup>

In addition to directly affecting group performance and commitment to the group, interdependence influences the relationship between member attributes and group performance. For example, a highly useful typology for classifying group tasks breaks them down into additive, disjunctive, and conjunctive tasks.<sup>51</sup> In an **additive task**, each group member contributes to group performance in proportion to his or her ability, so that the sum of the individual team members’ abilities equals the team performance. Shoveling snow is an example of an additive task—the amount of snow shoveled by a group of people is the sum of the amounts that each group member could shovel alone. Additive tasks are low in interdependence.

A **disjunctive task** is structured such that one person could perform it effectively alone as long as he or she had the requisite resources (information, cognitive ability, and so on). Solving an algebra problem is an example of a disjunctive task, in the sense that the solution to such a problem depends on the most capable group member—once one person has solved the problem, the team’s task is complete (this type of task is sometimes referred to as a eureka task). Disjunctive tasks are moderately high in task interdependence, because the people who do not solve the task are dependent on the one person who can solve the task; the person who solves the task, however, is not really dependent on the others.

In a **conjunctive task**, in contrast, the group’s level of performance depends on the resources that the least able group member brings to the task. For example, the speed with which a team of mountain climbers can reach the top of a cliff is a close function of how fast the slowest, weakest member can climb. A common expression in team contexts is that “a chain is only as strong as its weakest link”; this saying indicates how teams are often characterized as performing conjunctive tasks. The unique skills that each person brings to the task and their lack of interchangeability mean that, if one team member fails to perform his or her role, then the entire team will fail because no one else is equipped to carry out those duties.<sup>52</sup>

### Communication Structure

Once a decision on task structure is made and roles have been designed, the next question becomes who within the team can talk to whom. This issue deals with **communication structure**. If the members of a group cannot exchange information about their work, the group cannot function effectively. A viable communication structure is, therefore, crucial to group productivity. For managers, it is important to know about the different kinds of group communication structures and to be able to implement those that encourage the greatest productivity.

In research on group communication and productivity, five structures have received considerable attention: the wheel, Y, chain, circle, and completely connected communication network (Figure 9.5). The first three of these networks are the most centralized, in that a central member can control information flows in the group. In contrast, in the decentralized



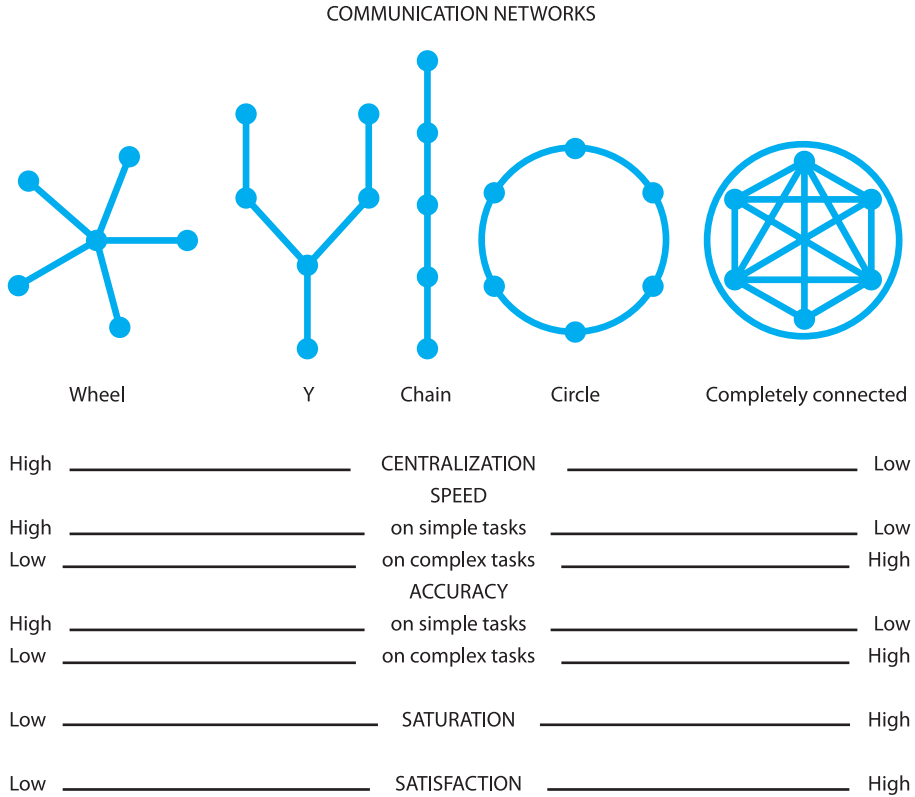


Figure 9.5 Group Communication Structures and Group Effectiveness

Source: Based on information in M. E. Shaw, *Group Dynamics: The Psychology of Small Group Behavior* (New York: McGraw-Hill, 1976), pp. 262–314.

circle and completely connected networks, all members are equally able to send and receive messages.

The five communication networks differ in several ways:

- the *speed* at which information can be transmitted
- the *accuracy* with which information is transmitted
- the degree of *saturation*, which is high when information is distributed evenly in a group and low when some members have significantly more information than others
- the *satisfaction* of members with communication processes and the group in general

As indicated in Figure 9.5, communication speed and accuracy in a group are affected both by the nature of the group’s communication network and by the relative complexity of the group’s task. Group tasks can range from *simple* tasks, which involve physical demands but little mental effort or need for communication among co-workers, to *complex* tasks, which require greater mental effort, less physical exertion, and significant communication.<sup>53</sup>

When a task is simple and communication networks are centralized, both speed and accuracy are higher. Centralization facilitates the minimal communication required to succeed at simple tasks. When tasks are simple and communication networks are decentralized,

however, speed and accuracy are lower because extra people are involved in communication. In contrast, when tasks are relatively complex, centralized communication networks lower both speed and accuracy because people serving as network hubs succumb to **information overload**. Overload and its effects are less likely to occur in decentralized networks, as more people process information and share responsibilities for communication. Both network saturation and member satisfaction are generally higher in decentralized networks. Everyone is informed and fully involved in the communication process and the task. (The exception to this rule involves centralized networks, where the one person located at the hub of the network is usually very satisfied.)

To summarize, centralization increases the productivity of groups in performing simple tasks that require little or no communication but generally reduces member satisfaction. In contrast, decentralization increases not only the productivity of groups in performing complex tasks that require much communication, but also member satisfaction and perceptions of group potency.<sup>54</sup> The decentralized network therefore provides an efficient *and* effective way of organizing communication when the group must tackle complex tasks. Indeed, changes in communication media have allowed organizations to increasingly employ decentralized communication networks, and some companies like Accenture have gone as far as eliminating the company's headquarters so that the company's consultants can spend more time at the client's site.<sup>55</sup> Accenture seems to be an exception, however, in the sense that many have questioned the degree to which computer-mediated communication can substitute for face-to-face communication. IBM also employs a great deal of virtual work arrangements, but finds that, if its team members do not meet face to face at least once a week, team performance and satisfaction suffer.<sup>56</sup>

### Group Size

The basic “infrastructure” of the group is established by making decisions about task structure and communication structure of the team. Once the infrastructure is in place, the next question becomes how big should the group be? Because of the wide variability in tasks that groups might be asked to perform, it is impossible to answer this question with a precise number that will apply to all cases. A good general principle is that a group should be as small as possible. That is, if one must err in putting together a group, it is far better to create a group that is too small than one that is too big.

On average, people working in smaller groups are more productive than people in larger groups.<sup>57</sup> As suggested by Figure 9.6, this relationship can be traced to several factors. First, small groups simply have fewer members who might get in each other's way. Clearly, production blocking caused by *physical constraints* is less likely to occur in small groups than in large ones. Second, group size influences productivity by affecting the amount of *social distraction* that people experience when they work in a group. The smaller the group, the less likely that group members will distract one another and interrupt behavioral sequences that are important to the task. Third, smaller groups have lower *coordination requirements*, because the fewer the members that a group has, the fewer the interdependencies that must be formed and maintained. Fourth, group size is related to the incidence of *behavioral masking*. The behaviors of a group member may be masked or hidden by the simple presence of other members. The smaller the group, the easier it is to observe each member's behavior, and this visibility in turn affects the frequency of social loafing, a problem we discussed earlier. Finally, group size influences the *diffusion of responsibility*—the sense that responsibility is shared broadly rather than shouldered personally. In a small group, each person is more apt to feel personally responsible for group performance and effectiveness.<sup>58</sup>

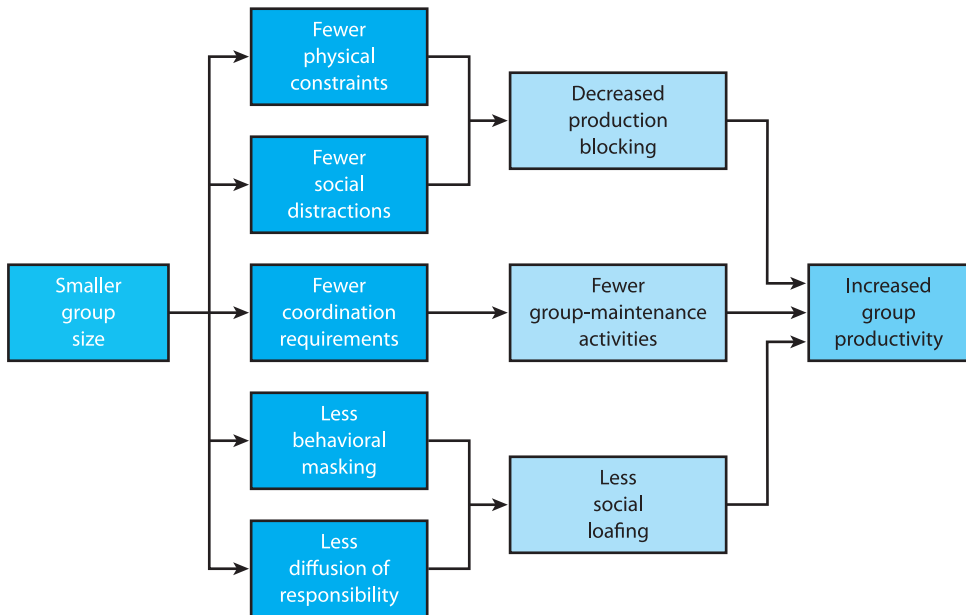


Figure 9.6 How Group Size Affects Group Productivity

### Group Composition

After establishing the number of people to include in the group, the next staffing decision involves the identities of those people. Having the appropriate level of expertise in the right positions helps ensure that the team can accomplish its tasks and subgoals. Clearly, having individuals with the right skills, abilities, knowledge, or dispositions is critical for all jobs—whether they are part of a team or not—but it is especially critical for teams because of the interdependence that exists among team members. Under such circumstances, the effective execution of one person’s role becomes a critical resource needed by others so that they can in turn execute their own roles. This consideration is also critical with conjunctive tasks, because the team will be only as good as its weakest member.

In addition to considering each team member’s standing on critical abilities, traits, and characteristics, in team contexts one must decide whether to construct the team so that the members are diverse (different) or homogeneous (the same) on these characteristics. In discussing issues related to diversity, we will focus on four different types of diversity, and how they combine to create faultlines or shared mental models.

### Functional Diversity

Functional diversity means that each member of the team differs in terms of educational background or area of task expertise. This is the defining characteristic of cross-sectional teams, and a large body of evidence indicates that, on complex tasks, heterogeneity on this characteristic is highly valuable—especially if people with different skills can communicate effectively and manage the debate that is likely to ensue from their different backgrounds and experiences.<sup>59</sup> The group also benefits when team members are aware of the different skills represented by each member, and they respect the training that the others have received.<sup>60</sup>

Finally, strong transformational leadership that focuses cross-functional teams on the larger team goals and can help mediate disagreements between its members is also essential in terms of promoting success and viability.<sup>61</sup>

### *Personality Diversity*

Turning to personality traits, the degree to which one wants people to be diverse or homogeneous on personality characteristics depends upon the nature of the trait. With certain traits such as conscientiousness, all members should have the same level of this characteristic. If some members rate very high on it, but others rate very low, this discrepancy may create the type of social loafing situation that starts fights and destroys group cohesiveness. Moreover, because they feel as though the other members are taking advantage of them, highly conscientious team members may withhold effort; ultimately, they may resemble low-conscientiousness members. Another virtue of highly conscientious team members deals with propensity to seek and offer help or support to other members. People who are high in conscientiousness are often the first to provide assistance to others when it is needed, and they are the least likely to ask for help from others when it is not needed.<sup>62</sup>

With other traits, such as extroversion, it is best to build in heterogeneity. If all members are high on extroversion, a power struggle will arise as everyone tries to dominate the group. Alternatively, if everyone in the group is low on this trait, no leadership will emerge and the group will flounder. Consequently, heterogeneity is preferred so that the group includes some people who are comfortable leading and others who are comfortable following. Heterogeneity in characteristics such as personality, values, and interests is often referred to as “deep-level psychological diversity” and, although this sometimes creates short-term problems in the group formation differentiation stage, it has generally been found to have long-term value in terms of team viability and performance.<sup>63</sup>

### *Gender Diversity*

Owing to the increased demographic diversity of the labor pool, beyond the effects of functional and personality diversity, one also has to consider diversity in demographic characteristics. Demographic diversity can promote team effectiveness because people from different backgrounds can tap into different social networks to gather information and new ideas.<sup>64</sup> Moreover, in some cases, just having one single member from a different group can have a substantial impact on the overall group. For example, research on gender diversity in teams seems to imply that it only takes the introduction of one female member to an all-male group to significantly reduce the level of excessive risk taking in that group.<sup>65</sup> The positive impact of a single person who differs from others in the group is especially likely if that person’s unique role is appreciated (and hence they are distinctive), as opposed to when their unique status is not valued (and hence they are just conspicuous).<sup>66</sup> For the most part, however, being a token female member in an all-male group on a task that has been traditionally male dominated is stressful, especially when the group is large.<sup>67</sup>

### *Cultural Diversity*

Given the increased frequency of international joint ventures, it is also important to consider the role of demographic and cultural diversity in groups. Although this kind of diversity has great potential to lead to new ideas and insights, group composition issues can often thwart this potential. In terms of cultural diversity, a more complex pattern emerges relative to what

is seen with diversity along functional personality or gender lines. To understand how cultural heterogeneity plays out, one needs to recognize that the eventual culture adopted by the team, referred to as a “hybrid culture,” represents a mixture of the cultures brought by individual team members. If all members of the team come from the same culture except one (for example, three Americans and one Chinese member), the hybrid culture naturally closely resembles the culture most of the members share, and the lone member from a different culture adapts. This type of convergence can lead to high performance. Similarly, when all of the members come from different cultures (for example, one American, one German, one Chinese, and one South African), no culture dominates, and the members must jointly construct a hybrid culture that is unique and idiosyncratic to that team. Although these teams may struggle initially, they eventually arrive at a hybrid culture. Indeed, teams can perform quite well under these conditions.

A problem seems to arise, however, when one subset of group members share a dominant culture and the others do not share this culture (for example, two Americans, one German, and one South African). In this instance, a struggle will ensue, and the team often fails to arrive at a hybrid culture. In teams with this type of “moderate” homogeneity, the dominant group (in this example, the two Americans) is not strong enough to assert the primacy of its particular culture, but still strong enough to resist adopting a new, unique, and idiosyncratic culture. Under these conditions, teams often perform poorly. Research suggests that culture is an all-or-nothing proposition: Highly homogeneous or heterogeneous teams can be effective, but teams with moderate levels of heterogeneity tend to struggle.<sup>68</sup>

#### *Faultlines: Diversity Convergence*

The effects of diversity seem to be particularly pronounced when multiple dimensions of diversity converge and create a strong set of subgroups within the larger group that threaten to break apart and go their own way. For example, imagine a four-person group composed of two men and two women, two marketing experts and two engineers, and two people from the U.S. and two people from France. One way this diversity could configure itself is such that the two males were also both engineers and both from the U.S., and the two women were both marketing experts from France. In this configuration, the group has a strong faultline because all three dimensions of diversity converge, and it is easy to predict how this group might break apart into two subgroups. In contrast, the same level of diversity could be configured in a group where one of the men was an engineer, but one of the women was an engineer also. Similarly one of the marketing experts was a man and one was a woman. Finally one of the men was from France and one was from the U.S. In this second configuration, there is no strong faultline, and it is harder to see how the group is likely to fall apart.<sup>69</sup>

Strong faultlines have been found to negatively impact group performance and viability.<sup>70</sup> Training group members to value diversity can often offset these negative effects. However, it is still better if one can cross-categorize people and avoid strong faultlines. One way to achieve this is through reward structures that place people who differ on other dimensions into “sub-teams” that have a common goal and all obtain the same reward for meeting that goal. This type of cooperative goal creates a new dimension of diversity where two people who differ on one dimension (gender) are the same when it comes to rewards.<sup>71</sup>

#### *Shared Mental Models*

Regardless of whether the team members differ on skills, traits, or culture, the critical consideration is their ability to arrive at a shared mental model about each other and the task at

hand. Teams with shared mental models enjoy a great deal of coordination with a minimum of communication, but sharing mental models yields benefits beyond coordination. First, high levels of mutual understanding create the conditions necessary for learning from experience, in the sense that most people in the team are likely to learn the same lessons from past successes and failures.<sup>72</sup> The mutual understanding that arises via shared mental models also helps the team diagnose problems with a member who, for one reason or another, is not meeting the expectations of the team. This type of mutual understanding among team members provides a system of checks and balances that is especially critical given the interdependence and specialization that characterize teams.<sup>73</sup>

## Keys to Team Effectiveness: Managing the Process

### Motivation in Groups

Member motivation is an important factor that affects group productivity and must be managed to minimize process loss and maximize synergy. A major aspect of motivation in team contexts is getting people to sacrifice their own self-interests for the overall good of the collective. As is true for research on individuals, studies of group performance have substantiated that setting specific, difficult group goals has a strong positive effect on group productivity, especially in contexts where goals are paired with feedback and incentives.<sup>74</sup> Goal accomplishment, in turn, tends to increase the group's collective self-efficacy, which makes it even more resilient to setbacks and able to overcome future challenges.<sup>75</sup>

Even if not tied directly to goals, the nature of rewards that groups receive has a big impact on the nature of the group's dynamics. Two fundamentally different types of group rewards exist: cooperative and competitive. **Cooperative group rewards** are distributed *equally* among the members of a group. That is, the group is rewarded *as a group* for its successful performance, and each member receives exactly the same reward. This compensation technique does not recognize individual differences in effort or performance, but rather rewards employees' efforts to coordinate their work activities and to share information with one another.<sup>76</sup> As a result, the cooperative reward system ignores the possibility that some members will make greater contributions to group task performance than others. As discussed in Chapter 8, the inequity caused by this type of reward distribution can demotivate group members who are high performers.

Under the **competitive group rewards** system, group members are rewarded for successful performance *as individuals in a group*. They receive *equitable* rewards that vary based on their individual performance. This system, which relies on the idea that high group performance requires all members to perform at their highest capacity, rewards individuals who accomplish more than their peers. It provides a strong incentive to individual effort, thereby enhancing individual productivity. Unfortunately, it can also pit group members against one another in a struggle for greater personal rewards. In such a case, the cooperation and coordination needed to perform group tasks may never develop, and group performance may suffer.

Which of these two approaches is likely to ensure the highest group productivity? The answer depends on the degree of task interdependence. Higher levels of task interdependence require group members to work closely together. For this reason, cooperative rewards, which encourage cooperation and coordination, promote group productivity when paired with high task interdependence.<sup>77</sup> In contrast, lower task interdependence—either complete independence or pooled interdependence—enables the members of a group to work independently. In this case, competitive rewards motivate high personal performance and lead to increased group productivity, as depicted in Figure 9.7.<sup>78</sup>

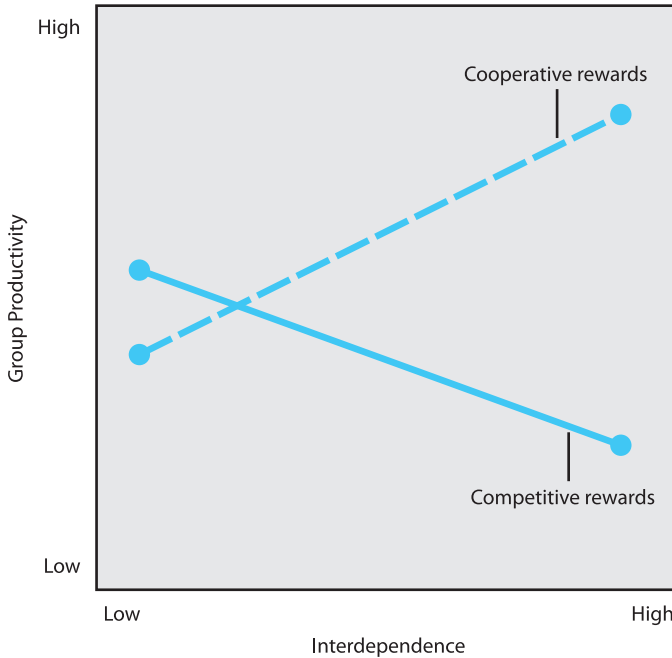


Figure 9.7 Effects of Task Interdependence and Type of Reward on Group Productivity

### Group Cohesiveness

A group's **cohesiveness** reflects the degree to which a group sticks together. In a cohesive group, members feel attracted to one another and to the group as a whole. A variety of factors encourage group cohesiveness:

1. *Shared personal attitudes, values, or interests.* People who share the same attitudes, values, or interests are likely to be attracted to one another.
2. *Agreement on group goals.* Shared group goals encourage members to work together. When members participate in determining their purpose and goals, they get to know and influence one another.
3. *Frequency of interaction.* Frequent interaction and the physical closeness afforded by it encourage members to develop the mutual understanding and intimacy that characterize cohesiveness.
4. *Group size.* Smaller groups are more likely to be cohesive than larger groups, because physical proximity makes it easier for their members to interact.
5. *Group rewards.* Cooperative group rewards that encourage interaction can stimulate cohesiveness, especially when members must perform interdependent tasks.
6. *Favorable evaluation.* Recognition given to a group for effective performance can reinforce feelings of pride in group membership and group performance.
7. *External threats.* Threats to a group's well-being that originate from outside the group can strengthen its cohesiveness by providing a common enemy that motivates a unified response. That is, conflict between groups can promote cohesion within groups.
8. *Isolation.* Being cut off from other groups can reinforce members' sense of sharing a common fate, again motivating a unified response.

The last two of these factors, external threats and isolation, can be particularly strong factors that bind otherwise incompatible people together into a tight cohesive unit. Group cohesiveness is a potential source of competitive advantage because cohesive groups need to spend less energy on group-maintenance activities, and can instead focus all their effort on alternative activities. Cohesiveness is not always an unmixed blessing, however.

First, cohesiveness does affect the degree to which the members of a group *agree* on productivity norms, but it does not ensure that the group will adopt *high* productivity norms. If a highly cohesive group has adopted norms favoring high productivity, its productivity will be high, because everyone agrees that working productively is the right thing to do (see the upper-right cell in Figure 9.8).<sup>79</sup> Such groups also tend to be persistent and are more likely to struggle through barriers to goal accomplishment.<sup>80</sup> In contrast, the productivity of highly cohesive groups adopting norms that favor low productivity tends to be quite low, because everyone agrees that working productively is *not* the objective (see the lower-right cell in Figure 9.8).

Second, cohesiveness can also increase the probability that the group will come to premature consensus when making difficult decisions, and this has sometimes been referred to as “groupthink.”<sup>81</sup> That is, rather than argue and hash out the positive and negative features of various alternatives, highly cohesive groups sometimes agree too quickly on the first idea that is offered up. This is especially the case if the group is isolated from outside sources of influence and the leader is the person who came up with the first idea. Dissenting opinions are either directly squelched or not shared with the team by members who self-censor their own misgivings. This flawed and incomplete process often leads to disastrous outcomes that outsiders, in the light of hindsight bias, severely criticize.

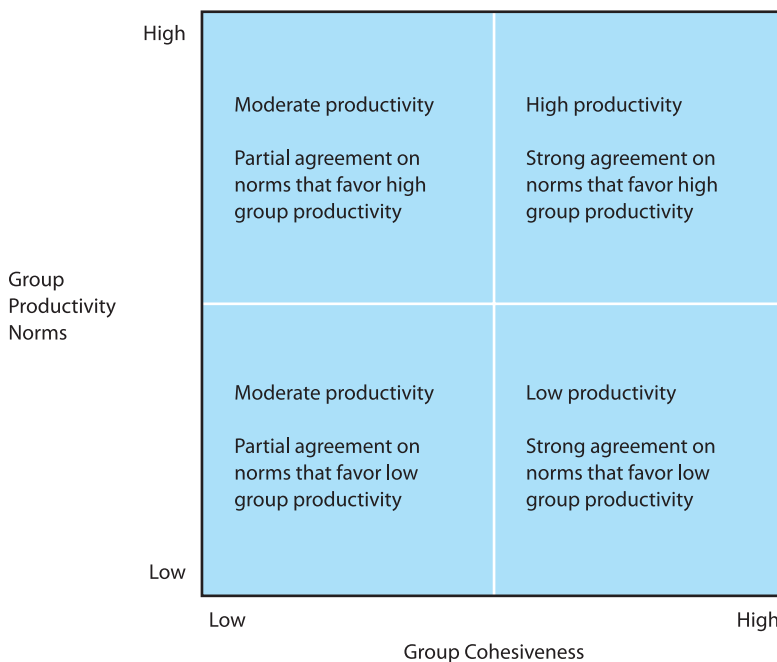


Figure 9.8 How Cohesiveness and Productivity Norms Affect Group Productivity



## Group Conflict

Groups that lack cohesiveness often experience a great deal of within-team conflict. Just as cohesiveness is not always an unmixed blessing when it comes to group performance, so too conflict is not always undesirable. Groups may experience two types of conflict: cognitive and mixed-motive. In **cognitive conflict**, all group members agree on the goals sought, but differ in their views on how those goals can be best met. With this type of conflict, members can still cooperate and do not necessarily compete. This type of conflict focuses on task procedures rather than on the people involved. Cognitive conflict within groups can lead to effective debate, and it often generates well-thought-out, highly effective decisions.<sup>82</sup> Some groups try to build in this type of conflict structurally by creating the role of “devil’s advocate,” that is, a team member whose primary job is to question and critique the team’s ideas. Although this kind of “contrived dissent” is better than nothing when it comes to preventing premature consensus, it is not nearly as potent as genuine dissent that comes from team members who truly believe the group is heading down the wrong track.<sup>83</sup>

Alternatively, groups can experience **mixed-motive conflict**. In these situations, group members may not agree on the goals being sought, and this type of conflict can prove difficult to overcome. Because mixed-motive conflict often hinges on differences in values, and given the centrality of values to people, this kind of conflict can quickly become personal and emotional, and hence needs to be carefully managed.<sup>84</sup> Unlike in cognitive conflict, where the best ideas for approaching the problem may win out in a group discussion, such discussions rarely persuade people to change their values. Left unchecked, this kind of conflict will lead the group to reduce its level of interdependence over time, and in many ways the group breaks apart and reverts to a collection of independent individuals looking out for their own personal interests.<sup>85</sup>

Under conditions of mixed-motive conflict, a formal leader may have to make a unilateral decision or create some type of political compromise or voting procedure to overcome the inability to reach group consensus. We will have more to say about this type of conflict and ways to manage it in Chapter 10 (on leadership) and Chapter 11 (power, politics, and conflict). For example, in the example we used to open this chapter, when Barack Obama was setting up his team of rivals, he was hoping to create cognitive conflict, but many outsiders feared that he was setting up this kind of deleterious mixed-motive conflict. His ability to steer his team in one direction versus the other may well have important implications for the future of the United States.

## Summary

Groups in organizations are formed on the basis of *functional grouping*, which favors efficiency, or *work flow grouping*, which enhances flexibility. Informal characteristics emerge during the process of *group development* as groups pass through the four stages of *initiation*, *differentiation*, *integration*, and *maturity*. Owing to *process loss*, groups are usually less productive than individuals working alone. Process loss can be traced to the effects of production blocking, group-maintenance activities, and social loafing. Owing to *group synergy*, groups can sometimes be more productive than individuals working alone; this gain can be traced to social facilitation, the need for affiliation, and within-group competition. *Teams* are a special type of group characterized by high levels of interdependence, work flow grouping, and differentiated knowledge, skills, and abilities possessed by team members. Because teams are not always more effective than individuals working alone, managers need to pay particular

attention to the group's *task and communication structure, size and composition, goals and incentives, and cohesiveness and conflict.*

### Review Questions

1. What are the three criteria of group effectiveness? Why is group effectiveness assessed in terms of all three criteria instead of being measured solely by group productivity?
2. What influence do group goals have on member motivation? What effects do group rewards have on motivation? What implications do your answers have for managers who must motivate individuals to perform productively in groups?
3. Explain why centralized communication structures enhance the productivity of groups performing simple tasks but depress the performance of groups performing complex jobs. What sort of structure would you recommend for a group of accountants who are auditing the books of a large manufacturing firm? Why?
4. Why is work flow grouping more flexible than functional grouping? If your company sold pencils, pens, and notebook paper, which type of grouping would provide the greatest benefit? Why?



# Leadership of Groups and Organizations

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When H. Lee Scott took over as CEO of Wal-Mart several years ago, the mood at the giant retailer was dark, even though, by every financial measure, the company was highly successful. The mood was dark because, whereas the financial indicators suggested that the company was doing well for its shareholders, that was about the only group that felt this way. Almost everyone else perceived that the company was a corporate villain and bully, assaulting workers, the environment, and consumers. Over the course of his tenure as the Wal-Mart leader, Scott dramatically reversed this perception, and now Wal-Mart is routinely listed as one of the most sustainable and corporately responsible organizations in the United States.<sup>1</sup>

For example, with respect to worker rights, Wal-Mart took the lead to pressure Uzbekistan cotton growers, who were using child labor to pick their crops, to abandon this practice. Wal-Mart used its power to create the first system for tracking where cotton came from, and organized a boycott against Uzbekistan, which quickly acquiesced to the corporate giant's pressure, freeing the children to return to school. With respect to the environment, Wal-Mart also used its clout to help solve the problem of declining fish populations in the Pacific Northwest. The company signed an agreement in 2006 that guaranteed that all the fish it sells in North America would be sourced from fisheries that are independently certified as being managed "sustainably," that is, fisheries that replenish the fish population at a rate equal to what they draw out.<sup>2</sup> Finally, with respect to consumers, while the nation struggled with how to manage healthcare costs, the retailer initiated a \$4 prescription program to which many have attributed the saving of thousands of lives among older and less affluent Americans.<sup>3</sup>

Wal-Mart is not the only organization whose leaders have recognized the importance of accomplishing important objectives beyond what is captured by financial indicators. George Pohle, global leader for IBM's business strategy consulting, has recently observed that, "when many of us were going to business school, the focus was on shareholder value, but now it is really about a broader definition of 'who are the folks you're trying to please while running your business?' It's about shareholders and other stakeholders, as opposed to focusing only on shareholder value."<sup>4</sup> Indeed, as Wal-Mart has found, meeting the needs of a diverse set of stakeholders is not inconsistent with shareholder value, because lawsuits, negative publicity generated by activist groups, government intervention, and boycotts from socially conscious consumers do nothing to promote financial success. Thus, when Scott worked to transform Wal-Mart from a corporate pariah into a source for corporate responsibility, he felt that he was merely extending the work of Wal-Mart's founder, Sam Walton, who always said that "You can't just keep doing what works one time, because the world is always changing around you."<sup>5</sup>

As we have already noted, few important tasks or goals can be accomplished by one person working alone. Indeed, this fact largely explains why so many organizations exist in our society. Nevertheless, few groups or organizations can accomplish much without the help of a single individual acting as a leader. Leadership is the force that energizes and directs groups. Many have suggested that the pool of available leaders is smaller today than it has ever been, and leadership development has been rated the number one human capital challenge facing organizations today.<sup>6</sup>

Given the centrality of leadership to the behavior of people in groups and to organizational achievement, it is important that we understand how leaders emerge and what qualities make them effective. This chapter focuses on this topic, showing how leadership is a complex function involving a leader, followers, and situations. All too often, people who want to learn about leadership focus too much on the leader and not enough on the followers and the situation. As we can see from the example that opened this chapter, however, the criteria by which leaders are judged are constantly changing, and someone who may have been successful in the past in terms of financial outcomes might not be able to survive in the new era, where one needs to meet the needs of a more diverse set of stakeholders.

Because of its centrality to organizational effectiveness, you should not be surprised to learn that a large number of theories have been proposed about leadership. Trying to explain them all might leave you more confused about the topic than when you started. Conversely, ignoring important approaches so as to simplify our discussion might give you a false impression about the real subtlety and complexity of the leadership process. If leadership were a simple process, everyone would be a great leader—which is hardly the case. In fact, a recent survey indicated that 83 percent of those questioned felt there was a leadership vacuum in their organization.<sup>7</sup> Given this state of affairs, superior leadership processes serve as another area where one firm can gain competitive advantage over another.

To facilitate the process of learning about the many different theories of leadership, this chapter begins by presenting a single conceptual framework, *the integrated leadership model*, that encompasses all of the other theories. The model reflects our emphasis on the three elements that go into leadership: *the leader*, *the followers* and *the situation*; and the three factors that characterize the leader, that is, his or her *traits*, *behaviors* and *decision-making styles*. Our general approach to leadership will assert that no one trait, behavior, or decision-making style is always going to result in leadership success but, instead, certain followers or situations require one set of traits, behaviors, and styles, whereas other followers or situations may demand an alternative set of traits, behaviors, and styles. With this framework in place, we then examine individual theories, fitting them into a single overall scheme. This model is comprehensive in reflecting the many ingredients that contribute to effective leadership, but concise in classifying these ingredients and showing how they can be applied in different organizational situations.

## The Integrated Leadership Model

Most people have a difficult time expressing exactly what the word *leadership* means. Indeed, even experts offer conflicting definitions of this term. Nevertheless, when asked to name strong leaders throughout history, people respond in a remarkably consistent way. Table 10.1 lists a number of people who are almost always cited as strong leaders. This list should give you an idea of how difficult it is to develop a definition of leadership that is specific enough to be useful, yet broad enough to include people who differ so greatly from one another. What traits do the people in the table share in common?

One characteristic shared by the people listed in Table 10.1 is their *ability to influence*

Table 10.1 Conventional Examples of Strong Leaders

Adolf Hitler	Martin Luther King, Jr.
Mahatma Gandhi	Napoleon Bonaparte
Mao Tse-Tung	Moses
Franklin D. Roosevelt	Abraham Lincoln
Winston Churchill	Golda Meir
John F. Kennedy	Nelson Mandela

*others.* The use of influence certainly should be paramount in any definition of leadership. Influence is not the only piece of the leadership puzzle, however. For example, would you consider an armed robber who enters a subway train and induces passengers to hand over their personal belongings to be a leader? Most people would recognize this person's influence, but would not consider this act one of leadership. Instead, a leader's influence must to some degree be *sanctioned by followers*. In some situations, a person may be compelled to lead; in other cases, a leader may be merely tolerated for a short time. Whatever the circumstances, the idea that followers voluntarily surrender control over their own behavior to someone else forms an integral part of any definition of leadership.

Finally, a complete definition of leadership must describe the context in which leadership occurs and the symbolism captured in the leader. Leadership occurs in *goal-oriented* group contexts. This statement does not mean that moving the group toward its goal is a leader's only function. Leaders also serve an important *symbolic* function for both group members and outsiders. Thus, during the recent economic downturn, there was a rash of CEO firings that sent a symbolic message to everyone within those organizations about how the future needed to be different from the past. Indeed, research shows that CEO firings double in recessions relative to other economic periods, despite the fact that no real evidence suggests that this improves matters in large organizations, other than symbolically. In fact, some observers have noted that changing leaders during downturns comes at "probably the worst time to make a change" and that this "almost invites bad decisions because a newcomer must act fast, before fully grasping the business."<sup>8</sup>

Still, this type of symbolism is important, because every employee cannot possibly understand all that goes on in the organization and one cannot fire the entire organization when things are going poorly. As noted in Chapter 4, when the complexity of a stimulus exceeds a person's cognitive capacity, the individual attempts to simplify the stimulus, and the leader provides the means for much of this simplification. The leader offers a logically compelling and emotionally satisfying focal point for people who are trying to understand the causes and consequences of organized activity. Focusing on the leader reduces organizational complexities to simple terms that people can more readily understand and communicate.<sup>9</sup> This simplifying aspect of leadership can often be dysfunctional, and therefore we need to resist the temptation to need to resort to such unsophisticated descriptions of the leadership process.

With these points in mind, we will define **leadership** as the use of non-coercive and symbolic influence to direct and coordinate the activities of the members of an organized group toward the accomplishment of group objectives.<sup>10</sup> In defining leadership, it is important to distinguish between leaders and managers. Recall from Mintzberg's overview of managerial roles (see Chapter 2) that the role of leader is just one of ten roles commonly occupied by managers. Leadership, according to Mintzberg, deals explicitly with guiding and motivating employees. From this point of view, leadership is merely one of many managerial tasks.<sup>11</sup>

Edward Hollander has suggested that the leadership process is best understood as the occurrence of mutually satisfying interactions among leaders and followers within a particular situational context. As Figure 10.1 indicates, the *locus of leadership* appears where these three forces—*leaders*, *followers*, and *situations*—come together. In Hollander’s view, we can understand leadership only by gaining an appreciation of the important characteristics of these three forces and the ways in which they interact.

To better appreciate the influence of followers on leadership, return to Table 10.1 and ask yourself the following questions. Could a person with Hitler’s totalitarian characteristics have risen to power in the United States following the Vietnam War, where opposing almost any government act was virtually a national pastime? Could Martin Luther King, Jr.’s peaceful, patient approach to civil rights have worked for Central European Muslims in their opposition to the Serbians, who seemed to seek nothing less than the extermination of the Muslims? Can anyone establish a position of leadership with a group of intellectuals who reject the very idea that they need to be led? Turning to the characteristics of the situation, would Mahatma Gandhi’s program of civil disobedience have been successful if he had been opposing the Nazis instead of the British? Could Saddam Hussein have remained in power in Iraq if that country had been a constitutional democracy? These questions underline the complex nature of leadership and the contribution of the situation in making a leader successful.

## Universal Approaches to Leadership

Not all theories about leadership emphasize the three-dimensional character of the leadership process as proposed by Hollander. The earliest probes into the nature of leadership focused almost exclusively on leader characteristics (rather than on followers or situations). These *universal theories* emphasized the traits and abilities, typical behaviors, and decision-making styles that made leaders different from non-leaders.

### Leader Traits

The earliest approaches to leadership held that leaders were born, not made. In 1869, Sir Francis Galton argued that the traits of great leaders were inherited. Studies of the physical

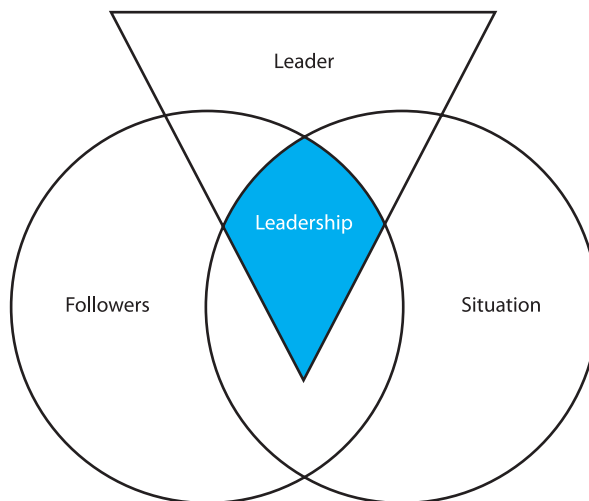


Figure 10.1 The Integrated Model of Leadership

characteristics of leaders have yielded weak but consistent relationships between a person's *energy level* and the ability to rise to positions of leadership. Large-scale research projects involving hundreds of leaders and thousands of followers suggest that the perceived amount of time and energy that the leader devotes to the job is a major determinant of follower ratings of leader effectiveness. Certainly, anecdotal reports support the notion that many leaders simply work harder than average individuals, and many CEOs report working 80 hours a week.<sup>12</sup>

Specific *technical skills* and *task knowledge* also show modest relationships with success in leadership, especially at lower levels in the organization. Knowing how to get the job done, and perhaps being the most knowledgeable person with respect to the task, helps leadership emergence in the beginning. Over time, however, as one climbs higher in the organizational hierarchy, this becomes less and less a virtue, as one often has to manage talented people whose skills within their own technical specialties exceed those of the leader. This is the major reason why many leaders “plateau” at middle levels of the organization, when the skills that got them to that place are no longer relevant for breaking through to the next level.<sup>13</sup>

At the highest levels of the organization, one needs to have a “question to statement ratio” that is heavily skewed towards questions. For example, historians have noted that John F. Kennedy was an effective leader during turbulent times because he was a skilled interrogator. He was both comfortable expressing what he did not know and a master in terms of tapping into other people's knowledge and quickly assimilating their expertise.<sup>14</sup>

In terms of personality traits, the evidence suggests that there are weak but consistent relationships between four of the five characteristics identified by the five factor model (see Chapter 3), suggesting that leaders are generally extroverted, conscientious, emotionally stable, and open to experience. Agreeableness is the one trait that is not associated with leadership, because, as you may suspect, it is more important in describing followers. In general, however, as we will see, the effects of these traits tend to depend on characteristics of the situation or the followers.<sup>15</sup> Keeping these exceptions in mind, however, the weak magnitude and contingent nature of the relationships between leadership and the personal traits of leaders ultimately prompted researchers to explore other approaches to understanding this important concept.

### Leader Decision-Making Styles

Whereas the research discussed previously dealt with leader traits, other early research in the area of leadership focused more specifically on how leaders make decisions and how these styles affect subordinates' rates of productivity and general satisfaction. Research in this tradition has examined three decision-making styles: *laissez-faire*, authoritarian, and democratic. The **laissez-faire leader** leaves the group alone to do whatever it wants, and most consider this to be an abdication of leadership. Research clearly shows that *laissez-faire* leadership fails to yield positive results for the group in terms of performance or satisfaction.<sup>16</sup> In an interesting account of her tenure at Enron, whistleblower Sherron Watkins noted that CEO Ken Lay's *laissez-faire* style leadership at the failed organization left him clueless and was a major reason for all of the unethical activity that took place there under his stewardship. Watkins noted that when it comes to leadership “clueless is far worse than toxic because at least with toxic you can begin to predict behaviors. With clueless, what you would expect from a boss can vary widely from their actual behavior. Crooks are much easier to deal with than fools.”<sup>17</sup>

The **authoritarian leader** is almost the opposite of the *laissez-faire* leader, and makes virtually all decisions by himself or herself. Members of groups led by authoritarian leaders



can be highly productive, but only when members are closely supervised. When left alone, these groups tend to slow down or stop working altogether.<sup>18</sup> Also, the evidence seems to suggest that authoritarian leadership tends to trickle down in an organization, in the sense that middle-level managers who have authoritarian bosses tend to act more authoritarian themselves.<sup>19</sup> This can become a major problem when organizations grow in size and complexity. For example, Microsoft leader Bill Gates had a very autocratic decision-making style that was highly effective as the organization grew from a small operation to a larger one. Gates involved himself in almost all significant organizational decisions. However, the complexity and scope of operation made it increasingly difficult for him to lead this way, especially when the organization was under attack by the Justice Department for antitrust violations. He ceded much of the authority for day-to-day operational decisions to Steve Ballmer, but together the two men still made a majority of the firm's decisions. Although attempts have been made to further decentralize the decision-making process, these have failed to interject decision-making control beyond the top management team, and some have suggested that this is the single biggest reason behind the stalled growth that one sees with Microsoft.<sup>20</sup>

In contrast, the **democratic leader** works with the group to help members come to their own decisions. Results of studies on leader decision styles suggest that most groups prefer a democratic leader to those employing the alternative styles. As with leader traits, however, research has revealed only modest correlations between this leader style and group performance. Subsequent research has indicated that democratic leadership is not always the single best approach for *all* followers and all situations. For example, research on cross-cultural differences suggests that, while workers from some countries, such as Denmark, perform very well under democratic leadership, workers from other countries, such as Russia, perform very poorly under participative leaders.<sup>21</sup>

### Leader Behaviors

A third school of early leadership research focused on the behaviors exhibited by leaders. Based on interviews with supervisors and clerical workers at the Prudential Insurance Company, researchers concluded that two general classes of supervisory behavior exist: **employee-oriented behavior**, which aims to meet the social and emotional needs of group members, and **job-oriented behavior**, which focuses on careful supervision of employees' work methods and task accomplishment. Early studies indicated that work attitudes were better and productivity was higher in the groups led by supervisors who displayed employee-oriented behaviors.<sup>22</sup>

Another set of early studies that relied on questionnaires rather than interviews reached similar conclusions about leader behavior. After analyzing workers' responses to a questionnaire through a sophisticated statistical procedure called factor analysis, researchers concluded that most supervisory behaviors could be assigned to one of two dimensions: **consideration** or **initiating structure**.<sup>23</sup> Table 10.2 shows some items from the Leader Behavior Description Questionnaire (LBDQ) that evolved from these original studies. The consideration dimension closely resembles the employee-centered orientation, in that both dimensions address the individual and social needs of workers. Similarly, the initiating-structure dimension resembles the job-centered orientation, in that both are concerned with the clarification of work processes and expectations. Rather than being mutually exclusive (that is, if a person is high on one dimension, he or she must be low on the other), these two dimensions are somewhat independent (that is, a person can be high on one dimension, and high, medium, or low on the other). If anything, a small positive correlation exists between the two dimensions, in that leaders who are considerate also seem to rate slightly higher on initiating structure.

**Table 10.2** Items Similar to Those in the Leader Behavior Description Questionnaire*Consideration items:*

1. Is easy to get along with
2. Puts ideas generated by the group into operation
3. Treats everyone the same
4. Lets followers know of upcoming changes
5. Explains actions to all group members

*Initiating-structure items:*

1. Tells group members what is expected
2. Promotes the use of standardized procedures
3. Makes decisions about work methods
4. Clarifies role relationship among group members
5. Sets specific goals and monitors performance closely

Based on this early research, Blake and Mouton developed the notion of the managerial grid, proposing that a leader needs to rate highly in terms of both concern for people and concern for production to be truly effective.<sup>24</sup> This approach was suggested to be “the one best way” to lead (that is, regardless of followers or situations). Blake and Mouton subsequently developed an elaborate training program to move managers in that direction. Managers find the program appealing because it points to two specific sets of behaviors—consideration and initiating structure—in which they can engage to enhance the attitudes and performance of their group. Despite its appeal, however, the managerial grid approach lacks support from rigorous scientific studies. In fact, some investigators have even labeled the whole idea a myth.<sup>25</sup> In terms of outcomes, an approach that is high on initiating structure tends to reduce mistakes but not help group creativity, whereas an approach that is high in consideration seems to have the opposite set of effects.<sup>26</sup>

### Transformational Leadership

Perhaps because of the weaknesses associated with universal approaches that emphasize only traits, or behaviors, or decision-making styles, subsequent universal approaches were developed that incorporated all three aspects of leadership simultaneously. Among these are theories of **transformational leadership**, which emphasize the ability of the leader to communicate new visions of an organization to followers.<sup>27</sup> Transformational leaders can be characterized by their traits, behaviors, and decision-making styles. In terms of traits, transformational leaders are often called *charismatic leaders* because of the centrality of this trait to their effectiveness, as well as their tendency to rely on moralistic emotional appeals rather than calculative, instrumental, or financial appeals, which tend to be employed more by transactional leaders.<sup>28</sup> In terms of behaviors, transformational leaders raise followers’ awareness of the importance of group goals, and increase the degree to which employees identify with such goals.<sup>29</sup> They also “raise the stakes” of organizational performance by convincing subordinates of the importance of the leader’s values and vision, as well as the dangers of deviating from this vision.<sup>30</sup>

This vision and an emphasis on change distinguish transformational leaders from more ordinary leaders.<sup>31</sup> Transformational leaders accomplish this by creating a strong identification between the leader and the follower, as well as increasing the strength of the bond among the followers themselves, thus enhancing group cohesiveness and collective self-efficacy.<sup>32</sup>

Indeed, the social and value-oriented nature of charismatic leadership is best revealed by research that shows that perceptions of charisma spread much faster among people who are in the same social network (friends), as opposed to the same physical location or task network.<sup>33</sup> Still, many transformational leaders also engage in behaviors that most would characterize as transactional, and the two styles are often complementary and not mutually exclusive.<sup>34</sup>

Indeed, as we have seen in previous studies of leadership, there seem to be contingencies associated with the success of this leadership style that make it more effective in some situations or with some followers relative to others. For example, research indicates that, with respect to followers, charismatic leadership is more effective with followers who are collectivistic rather than individualistic.<sup>35</sup> In terms of situations, it also seems to be more effective when there is direct contact between the leader and the followers, as opposed to when the relationship is indirect.<sup>36</sup> Charismatic leadership also seems to be more effective when the task is not necessarily intrinsically satisfying or important on its own merits.<sup>37</sup> Finally, charismatic leadership also seems to be less important in contexts where people perceive high levels of procedural justice, suggesting that trust in procedures can serve as a substitute for the role of a charismatic leader.<sup>38</sup>

We will discuss the concept of substitutes for leadership in more detail in a later section of this chapter. For now, we will merely assert that, as these findings suggest, the evidence argues against the notion that there is any “one best way” of leading, regardless of followers and situations. The primary problem of all the approaches we have discussed is that they specify one best way to lead (for example, be extroverted or initiate structure, or use a democratic leadership style) regardless of the characteristics of followers and situations. This led to weak results in terms of predicting or explaining leader emergence and effectiveness, and started many people wondering just how critical leadership really was to large organizations. As we will see in our next section, some began to argue that leadership might be irrelevant.

### Leader Irrelevance

Advocates of leader irrelevance, a situation-based approach to understanding leadership, emphasize that situations are much more important determinants of events than leader characteristics, for several reasons.<sup>39</sup> First, factors outside the leader’s control tend to affect profits and other critical elements in the business context more than anything a leader might do. In fact, when one examines the timing of effects, some have found that ratings of a leader’s charisma are *caused by* how well the company performs, not vice versa.<sup>40</sup>

Second, even leaders at relatively high levels tend to have unilateral control over only a few resources. In very large organizations, even a highly charismatic person’s impact is diluted, especially given the short tenure of many top leaders.<sup>41</sup> Moreover, the discretionary use of any set of resources is constrained by the leader’s accountability to other people both inside and outside the organization. Even the CEO of a major corporation must answer to shareholders, consumers, government regulators, and other people in the company. For example, when Toyota announced in 2008 that it was searching for a new CEO, no one really expected a major departure from business as usual at the company. As one industry analyst noted, “no matter who takes over at Toyota, it may not make a huge difference. Unlike a more personality-driven company where a new executive may take the company in a new direction, Toyota has taken a more cautious approach to its management style. Toyota values making decisions slowly and building consensus among all employees before moving forward.”<sup>42</sup>

Finally, the selection process through which all leaders must go filters people such that those in leadership positions tend to act in similar ways. For example, the process used to select the president of the United States makes it impossible for some types of people (for

example, illiterates, introverts, extremists of either the left or the right) to rise to that position. The people who make it through screening procedures of this kind tend to be alike in more ways than they are different. “Homogenizing” leaders in this way reduces the effect that any change in leadership has on an organization’s outcomes. Organizations only tend to go against the historical grain of their leadership profile when confronted with massive failures.<sup>43</sup> But, even in this context, leaders are limited, because they have to make sure that they do not mirror the actions of their predecessors, and hence they are forced to act in certain ways owing to factors outside their control (distancing themselves from their predecessors).<sup>44</sup>

The failure to find robust direct relationships between leader traits, behaviors, and decision-making styles promoted this kind of anti-leadership sentiment. In fact, it can be quite useful to remember that leaders are often victims of their environments rather than masters of their domain. Even so, research on leadership continued, and more contemporary approaches maintained that leadership did provide some value. These approaches suggested, however, that the value of leadership was a highly contingent phenomenon that could not be captured by “one best way” approaches that dominated the early research in this area. The theories discussed next all acknowledge these types of leader–follower–situation interactions.

## Characteristics of Followers and Situations

### Vertical Dyad Linkage

An approach to leadership that emphasizes the characteristics of followers is the *vertical dyad linkage* (VDL) theory of leadership. A **vertical dyad** consists of two persons who are linked hierarchically, such as a supervisor and a subordinate. Most studies that involve measurements of leader consideration or initiating structure average subordinates’ ratings of leaders. VDL proponents, however, argue that there is no such thing as an “average” leadership score. Instead, they insist, each supervisor–subordinate relationship is unique. A supervisor may be considerate toward one person but not another. Similarly, the leader may initiate structure for some workers but not others.

The importance of distinguishing dyadic from average scores has received broad research support. For example, Figure 10.2 compares the strength of the relationship between

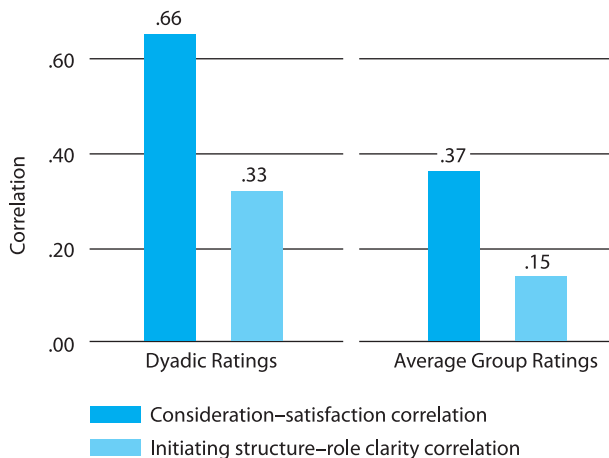


Figure 10.2 Measuring the Relationship between Leader Behaviors and Follower Outcomes by Dyadic Ratings and Average Group Ratings

(1) leader consideration and follower satisfaction and (2) leader initiating structure and follower role clarity as measured by both dyadic scores and average scores.<sup>45</sup> As shown in the figure, the relationships based on dyadic scores were much stronger than the relationships based on average scores. This finding suggests that leaders do behave differently with different subordinates and that these differences spill over into worker reactions.<sup>46</sup>

The vertical dyad linkage approach also suggests that leaders tend to classify subordinates as either in-group members or out-group members. According to this theory, *in-group members* are willing and able to do more than the tasks outlined in a formal job description.<sup>47</sup> Once they have been identified, the leader gives these individuals more latitude, authority, and consideration, and they respond by providing even higher levels of citizenship behavior over and above the normal call of duty.<sup>48</sup> The impact of being an in-group member is especially powerful when one's leader has a strong in-group relationship with his or her own leader.<sup>49</sup> *Out-group members*, on the other hand, either cannot or will not expand their roles beyond formal requirements. Leaders assign these individuals more routine tasks, give them less consideration, and communicate less often with them. Because their status is more tenuous relative to in-group members, out-group members tend to become very risk averse and unwilling to take chances for fear of making mistakes.<sup>50</sup> This is especially the case in contexts where an out-group member is working for a leader who has relatively low power and access to resources owing to a precarious relationship with his or her own leader.<sup>51</sup>

Whether distinguishing among subordinates in this manner improves a leader's effectiveness depends on the leader's reasons for placing some people in the in-group and others in the out-group. Research shows that performance is not always the reason for separating members into in-groups and out-groups; indeed, if these kinds of distinctions are based on non-performance-related information, then this classification can interfere with leader effectiveness. Highly competent and committed workers might differ from their supervisors but could excel if given in-group status and support. On the other hand, when leaders differentially weigh the opinions of their followers based on their competence, highly effective results often follow.<sup>52</sup>

### Life-Cycle Model

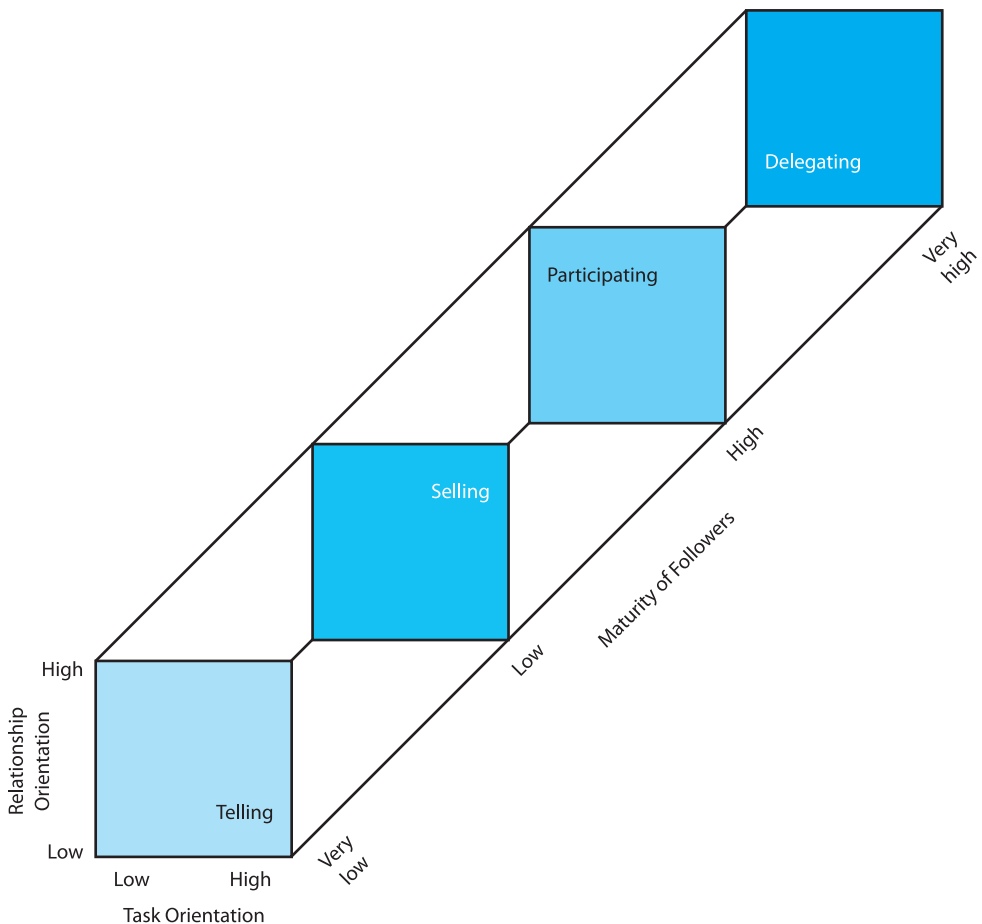
Whereas the previous approach focused on leader traits and behaviors, the next approach features the leader's decision-making style, emphasizing how it combines with characteristics of the followers to determine leadership effectiveness. According to the life-cycle model developed by Paul Hersey and Kenneth Blanchard, the effectiveness of a leader's decision-making style depends largely on followers' level of maturity, job experience, and emotional maturity.<sup>53</sup> This model proposes two basic dimensions on which decision-making style may vary: task orientation and relationship orientation.

The life-cycle model suggests that these two dimensions combine to form four distinct types of decision styles: telling, selling, participating, and delegating. The *telling style* is characterized by high task orientation and low relationship orientation—the leader simply tells the follower what to do. The *selling style* is characterized by both high task and high relationship orientations, in that the leader tries to convince subordinates that the decision is appropriate. The *participating style* is marked by a high relationship orientation but a low task orientation. The leader who uses this style of decision making includes subordinates in discussions so that decisions are made by consensus. Finally, in the *delegating style*, which is low on both task and relationship orientations, the leader actually turns things over to followers and lets them make their own decisions.

According to Hersey and Blanchard, the type of decision-making style that a leader should

adopt depends on the level of maturity of the followers (Figure 10.3). The model suggests that, for followers at very low levels of maturity, telling is the most effective leadership decision style. As followers move from very low to moderately low levels of maturity, a selling style becomes more effective. That is, the leader in this case should act as an opinion leader.<sup>54</sup> When followers show a moderately high level of maturity, participating is the most effective style. At the very highest levels of follower maturity, the delegating style leaves followers essentially on their own.

Although empirical research has not supported this model completely, the notion that performance will be higher in matched situations is supported at one level of maturity—the lowest. That is, with workers at low levels of maturity, the telling style is slightly more effective in eliciting good performance than the other styles. A good example of this can be seen at Yahoo! Inc. New CEO Terry Semel came into a situation where the playful, egalitarian, and



**Figure 10.3** The Life-Cycle Model of Leadership in Four Dimensions

Three of this model's four dimensions are easily seen. Relationship orientation may be low (bottom half of the rectangular box model) or high (top half). Task orientation may also be low (left half of the model) or high (right half). Follower maturity ranges from very low (front of the model) to very high (back). The fourth dimension, leader effectiveness, is represented by the highlighted cell at each follower-maturity level. For example, at the high-maturity level, the highlighting of the cell for the participating leader style—which is high on relationship orientation and low on task orientation—indicates that at this level this style should be the most effective.

loosely structured culture among talented but young and inexperienced software designers had resulted in chronic performance problems at the firm. Most analysts thought that Yahoo would go the way of other failed dot-coms, but the 60-year-old Semel came in and autocratically restructured work processes and decisions, and generally brought a much needed dose of control and maturity to the firm. In 18 months, Semel had helped quadruple Yahoo sales and double the stock price.<sup>55</sup> However, once the organization had reached that stage of development, it needed a leader with a more external orientation who could delegate internal operational matters to lower-level managers. Semel did not seem to be able to make this transition, however, and was ousted as the CEO in 2007, just three years after orchestrating a major turnaround.<sup>56</sup>

### Substitutes for Leadership

Whereas the VDL approach to leadership places a great deal of weight on leader behaviors and the characteristics of followers, the **substitutes for leadership** theory emphasized leader behaviors and the situation. Although not as extreme as the anti-leadership approaches, this theory argues that traditional leader behaviors, such as initiating structure and consideration, are sometimes made irrelevant by certain characteristics of situations.<sup>57</sup> That is, characteristics of situations can act to *substitute* for leader behavior. Figure 10.4 illustrates the effect of a substitute. Here consideration leads to follower satisfaction when boring tasks must be performed. When tasks are intrinsically satisfying, however, the satisfying nature of the task substitutes for leader behavior; leader consideration has no effect in this case, because satisfaction is already high.

One review of the scientific literature on this topic suggests that the most powerful substitutes for leadership relate to both characteristics of the task and the organization as a whole. In general, leadership tends to be neutralized in situations where tasks are intrinsically

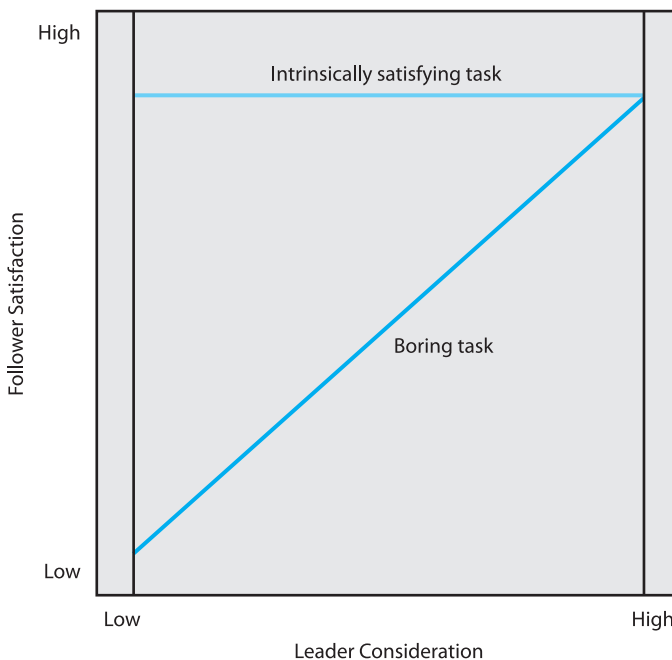


Figure 10.4 How a Situational Characteristic Can Substitute for Leader Behavior

satisfying and good objective feedback about task performance is provided. Leadership is also neutralized in organizations that are highly formalized (that is, organizations that develop written rules and procedures for most jobs) and lacking in flexibility.<sup>58</sup>

## Comprehensive Theories of Leadership

Whereas all four of the interactive approaches discussed earlier deal with two of the three forces identified in the transactional model of leadership (leader–follower–situation), the comprehensive leadership theories discussed in this section account for all three simultaneously. The three comprehensive theories that we will examine differ only in that each tends to focus on a particular leader characteristic—either a personal characteristic, a behavioral orientation, or a decision-making style.

### Fiedler's Contingency Theory

Think for a moment of someone with whom you dislike to work. In fact, considering all of your co-workers in the past, whom do you remember as being the worst? Now rate this person on the qualities listed in the scale shown in Table 10.3. If you described your *least preferred co-worker* (LPC) in relatively harsh terms, then contingency theory would suggest that you are most likely to take a *task orientation* toward leadership. Task-oriented leaders emphasize completing tasks successfully, even at the expense of interpersonal relations. A task-oriented leader finds it difficult to overlook the negative traits of a poorly performing subordinate. On the other hand, if you described your least preferred co-worker in relatively positive terms, you are likely to take a *relationship orientation* toward leadership. Relationship-oriented leaders, according to this theory, are permissive, considerate leaders who can maintain good interpersonal relationships even with workers who are not contributing to group accomplishment.

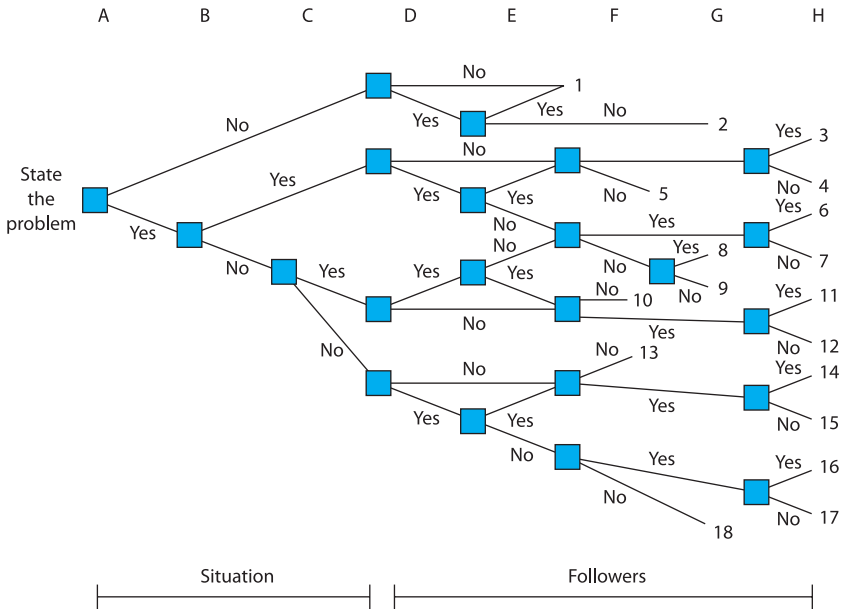
The leader's orientation toward either tasks or relationships is the central piece of this complex and controversial theory of leadership that was proposed by Fred Fiedler.<sup>59</sup> Fiedler's model is called a contingency theory of leadership because it holds that the effectiveness of a leader's orientation depends on both the followers *and* the situation. A leadership situation can be placed along a continuum of favorability, depending on three factors. First, **leader–follower relations** are considered good if followers trust and respect the leader. Good relations are obviously more favorable for leader effectiveness than poor relations. Second, **task structure** is high when a group has clear goals and a clear means for achieving these

Table 10.3 Items Similar to Those on the Least Preferred Co-Worker Scale

Agreeable	<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	Disagreeable
Closed-minded	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	Open-minded
Courteous	<u>8</u>	<u>7</u>	<u>6</u>	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>	Rude
Agitated	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	Calm
Dull	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	Fascinating



- A. Is there a quality requirement such that one solution is likely to be more rational than another? (Situation)
- B. Do I have sufficient information to make a high-quality decision? (Situation)
- C. Is the problem structured? (Situation)
- D. Is acceptance of the decision by subordinates critical to effective implementation? (Followers)
- E. If I were to make the decision by myself, is it reasonably certain that it would be accepted by my subordinates? (Followers)
- F. Do subordinates share the organizational goals to be attained in solving this problem? (Followers)
- G. Is conflict among subordinates likely in preferred solutions? (This question is irrelevant to individual problems.) (Followers)
- H. Do subordinates have sufficient information to make a high-quality decision? (Situation)



Answers and Appropriate Leadership Styles (see also Table 10.4)

Answer Number	Individual Problems	Group Problems	Answer Number	Individual Problems	Group Problems
1	AI, AII, CI, DI, GI	AI, AII, CI, CII, GII	10	AII, CI	AII, CI, CII
2	DI, GI	GII	11	AII, CI, DI, GI	AII, CI, CII, GII
3	AI, AII, CI, DI, GI	AI, AII, CI, CII, GII	12	AII, CI, GI	AII, CI, CII, GII
4	AI, AII, CI, GI	AI, AII, CI, CII, GII	13	CI	CII
5	AI, AII, CI	AI, AII, CI, CII	14	CI, DI, GI	CII, GII
6	DI, GI	GII	15	CI, GI	CII, GII
7	GI	GII	16	DI, GI	GII
8	CI, GI	CII	17	GI	GII
9	CI, GI	CI, CII	18	CI, GI	CII

Figure 10.5 The Vroom-Yetton Decision Tree Model of Leadership

goals. High task structure is more favorable for the leader than low task structure. Third, **position power** is the ability to reward or punish subordinates for their behavior.

Fiedler's analysis of a number of studies that used the least preferred co-worker scale suggested that task-oriented leaders are most effective in situations that are either extremely favorable or extremely unfavorable. Relationship-oriented leaders, on the other hand, achieve their greatest success in situations of moderate favorability. Although this was one of the first comprehensive theories of leadership, and is hence important historically, the theory has been criticized on numerous grounds as being "too data-driven." According to his critics, Fiedler started with a set of results that he tried to explain, rather than with a logical, deductive theory. In addition, the LPC measure itself has aroused controversy. Critics have questioned what the scale actually measures and how well it measures this variable.<sup>60</sup>

### Vroom–Yetton Decision Tree Model

Fiedler's comprehensive model focused on personality characteristics of the leader. In contrast, the *decision tree model of leadership* developed by Victor Vroom and his colleagues emphasizes the fact that leaders achieve success through effective decision making.<sup>61</sup> Vroom's model recognizes four general styles of leadership decision making: *authoritarian*, *consultative*, *delegation*, and *group-based*. These alternatives are then broken down into seven specific decision styles: three that are appropriate to both individual and group decisions, two that are appropriate only to decisions involving individual followers, and two that are appropriate only to decisions that involve an entire group of followers (see Table 10.4).

Like all comprehensive theories of leadership, the decision tree model proposes that the most effective leadership style depends on characteristics of both the situation and the followers. Specifically, the model asks eight questions—three about the situation and five about the followers—to determine which of the seven leadership styles outlined in Table 10.4 is best. The decision tree presented in Figure 10.5 makes the question-and-answer process easy. Responding to questions A through H leads to one of 18 answers, each of which identifies one or more decision-making styles that are appropriate to the problem confronted. To choose among two or more styles, the leader must decide whether to maximize the speed of decision making or the personal development of subordinates. Autocratic approaches favor speed, whereas consultative or group approaches favor employee growth.

For example, suppose you are a corporate vice president just been given the responsibility for starting up a new plant in a developing country, and you must choose a plant manager. Should it be one of your five current and highly experienced plant managers? Should it be someone from outside the firm who has had experience working overseas? Should it be a citizen of the target country? As vice president, you might move through the decision tree as follows:

- Question A:* Yes. Some managers may be better suited than others.
- Question B:* No. You, the vice president, may not know all the interests or past experience that would be relevant to the assignment.
- Question C:* No. This problem is a new one for the company, and thus no clear guidelines dictate what steps to take.
- Question D:* Yes. Your current managers could all find good jobs with other firms in their own country if they refused the overseas job.
- Question E:* No. The decision will have too large an effect on subordinates' lives.
- Question F:* Yes. They have been with the company a long time and are committed to the organization.
- Question H:* No. Only you, the vice president, know about many details of the assignment.

**Table 10.4** The Seven Decision Styles in the Vroom–Yetton Decision Tree Model of Leadership*For all problems:*

**A1** You solve the problem or make the decision yourself, using information available to you at the time.

**All** You obtain any necessary information from subordinates and then decide on the solution to the problem yourself. You may or may not tell subordinates what the problem is in getting the information from them. The role played by your subordinates in making the decision is clearly one of providing specific information that you request, rather than one of generating or evaluating solutions.

**CI** You share the problem with the relevant subordinates individually, getting their ideas and suggestions without bringing them together as a group. Then *you* make the decision. This decision may or may not reflect your subordinates' influence.

*For individual problems:*

**GI** You share the problem with one of your subordinates, and together you analyze the problem and arrive at a mutually satisfactory solution in an atmosphere of free and open exchange of information and ideas. You both contribute to the resolution of the problem, with the relative contribution of each being dependent on knowledge rather than formal authority.

**GII** You share the problem with your subordinates in a group meeting. In this meeting you obtain their ideas and suggestions. Then *you* make the decision, which may or may not reflect your subordinates' influence.

*For group problems:*

**DI** You delegate the problem to one of your subordinates, providing any relevant information that you possess, but giving your subordinate responsibility for solving the problem independently. Any solution that the person reaches will receive your support.

**GII** You share the problem with your subordinates as a group. Together you generate and evaluate alternatives and attempt to reach agreement (consensus) on a solution. Your role is much like that of chairperson, coordinating the discussion, keeping it focused on the problem, and making sure that the critical issues are discussed. You do not try to influence the group to adopt "your" solution and are willing to accept and implement any solution that has support of the entire group.

*Note:* A stands for authoritarian, C for consultative, D for delegative, and G for group based.

The "no" response to question H leads to answer number 17. This answer, applied to a group problem, eliminates both autocratic and consultative styles and recommends the GII group-based decision-making style.

Early studies of the model's usefulness asked managers to think about past decisions that were effective or ineffective and had them trace their decision processes back to see whether they had followed the model's prescriptions. When the managers' decision-making processes were consistent with the model, 68 percent of decisions were effective, compared to only 22 percent when decisions violated the model. Research also indicates that most managers' natural decision-making processes seem to violate the model's prescriptions. In particular, managers tend to overuse the consultative CII style and underutilize the group-based GII style. The difference between these two styles is subtle but critical; the leader retains ultimate decision-making responsibility in the first but not the second. Giving up this ultimate responsibility is difficult for many leaders, because they know they may ultimately be blamed for the employees' mistakes.<sup>62</sup>

## Path–Goal Theory

The most comprehensive theory of leadership to date and the theory that best exemplifies all aspects of the transactional model is the *path–goal theory of leadership*.<sup>63</sup> At the heart of the path–goal theory is the notion that the leader’s primary purpose is to motivate followers by clarifying goals and identifying the best paths to achieve those goals. Because motivation is essential to the leader role, this approach is based on the expectancy theory of motivation (described in Chapter 5) and emphasizes the three motivational variables that leaders may influence through their behaviors or decision-making styles: valences, instrumentalities, and expectancies.

The job of the leader, according to the path–goal theory, is to manipulate these three factors in desirable ways. Correspondingly, the theory’s proponents recommend that leaders fulfill three major roles. First, leaders need to *manipulate follower valences* by recognizing or arousing needs for outcomes that the leader can control. Second, leaders must *manipulate follower instrumentalities* by ensuring that high performance results in satisfying outcomes for followers via contingent rewards and punishments.<sup>64</sup> Third, leaders need to *manipulate follower expectancies* by reducing frustrating barriers to performance. This can often be accomplished by leveraging the leader’s larger social network for the benefit of the subordinates, whose networks are more constrained.<sup>65</sup>

The path–goal theory proposes that four behavioral styles can enable leaders to manipulate the three motivational variables: directive, supportive, participative, and achievement-oriented leadership. As described in Table 10.5, these styles are composed both of behaviors, such as initiating structure, and of decision-making styles, such as the authoritarian approach. In each case, the leader’s effectiveness depends on follower and situation characteristics. Much like the substitutes for leadership approach, the path–goal theory recognizes that situational characteristics may make leader behavior unnecessary or impossible.

Researchers have tested small parts of the path–goal model. Some of their findings are as follows:

- *Leader* participative behavior results in satisfaction in *situations* where the task is non-routine, but only for *followers* who are nonauthoritarian.<sup>66</sup>
- *Leader* supportive behavior results in *follower* satisfaction, but only in *situations* where the task is highly structured.
- *Leader* achievement-oriented behavior results in improved performance, but only when *followers* are committed to goals.<sup>67</sup>

**Table 10.5** The Path–Goal Theory’s Four Behavioral Styles

Directive leadership	The leader is authoritarian. Subordinates know exactly what is expected of them, and the leader gives specific directions. Subordinates do not participate in decision making.
Supportive leadership	The leader is friendly and approachable and shows a genuine concern for subordinates.
Participative leadership	The leader asks for and uses suggestions from subordinates but still makes the decisions.
Achievement-oriented leadership	The leader sets challenging goals for subordinates and shows confidence that they will attain these goals.

Perhaps because the theory is so complex, no one has yet undertaken a comprehensive study of the path–goal theory that tests every variable. The theoretical framework provided by the path–goal theory, however, is an excellent one for generating, testing, and understanding the complexities of the leadership process. Moreover, its tie to the expectancy theory of motivation makes it particularly suitable for leadership as conceptualized by Mintzberg—that is, the leader as a group motivator.

### The Integrated Leadership Model Revisited

This chapter began with a discussion of an integrated model of leadership and expressed a view of leadership as a complex interaction involving characteristics of the leader, the followers, and the situation. These ideas provided a framework for our discussion of several theories of leadership that vary in breadth and emphasis. Figure 10.6 depicts the dynamic relationships among the elements of these several theories as they fit together in an *integrated model of leadership*. At the core of this model is the notion that the purpose of leaders is to meet the performance and satisfaction needs of individual group members. Through their abilities and personality characteristics, their behaviors, and their decision-making styles, leaders must affect their followers’ valences, instrumentalities, and expectancies.

The first key to applying this model to your own leadership situation is to engage in self-assessment to learn your standing on various traits (for example, extroversion or LPC), behavioral tendencies (on dimensions such as consideration and initiating structure), and decision-making style (autocratic, consultative, participative, delegative). High levels of self-awareness are critical for leadership effectiveness and can often be raised through 360-degree feedback interventions like those discussed in Chapter 4.<sup>68</sup>

Leaders must recognize that these phenomena are affected by a variety of follower characteristics. A trait, behavior, or decision style that works well with one group of followers is

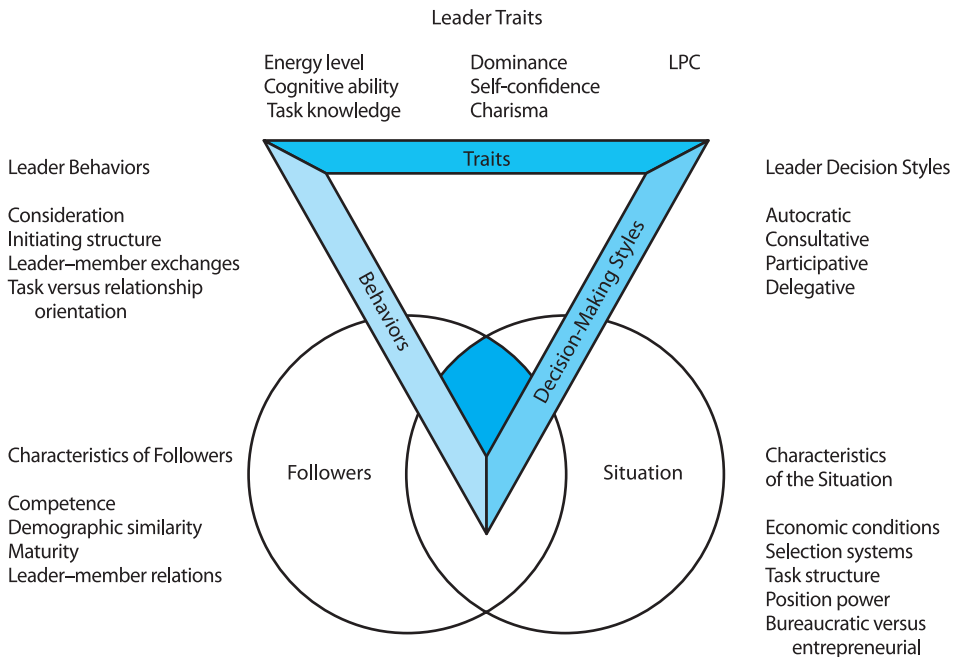


Figure 10.6 The Fully Articulated Integrated Model of Leadership

unlikely to work well with another group. Thus, the second key to applying this model to your own leadership situation is to make a critical assessment of those people who are following you, in terms of their maturity, competence, and cohesiveness, to determine the degree of match between their characteristics and yours.

Finally, the situation that leaders find themselves in will also affect the relationship between the leaders' traits, behaviors, and decision styles on the one hand, and group effectiveness on the other. Thus, the third key to applying this model is that leaders need to study the situation they are in (for example, in terms of task structure or the leader's power to change certain conditions like the overall economy) to determine what kinds of leadership will be most effective with this specific configuration of followers and situation. Effective leadership requires careful analysis of and reaction to the three forces—leader, followers, and situation—highlighted in the integrated framework you have learned about in this chapter. Although this may seem complex, as we saw in the story that opened this chapter dealing with Wal-Mart, the criteria for what makes for an excellent leader are constantly changing. A leader cannot simply assume that what worked well for one group of followers in one situation is likely to work for all followers in all situations.

## Summary

Leadership differs from management in that leading is merely one task of managerial work. The emergence and continued success of a *leader* is a complex function of personal characteristics, characteristics of the *followers*, and characteristics of the *situation*. Important personal characteristics of a leader seem to include high extroversion and conscientiousness, as well as task knowledge. Important dimensions of leader behavior include *consideration* of employee needs (sometimes referred to as a *relationship orientation* or concern for people), *initiating structure* (sometimes referred to as a *task orientation* or concern for production), and leader-member exchange behaviors that separate subordinates into in-groups and out-groups. Leaders also differ in terms of their decision-making styles. *Authoritarian* leaders make all decisions for their followers. Leaders who take a *laissez-faire* approach leave followers to do as they please. Leaders may also take a *democratic* approach, working actively with followers to ensure that all group members have a chance to contribute to a task. According to the *integrated model of leadership*, the effectiveness of these different behaviors and decision-making styles is contingent on characteristics of the followers and of the situation. Followers differ along several important dimensions. They may be highly knowledgeable, mature, professional, and committed to the organization and its mission, or they may be quite the opposite. Different leadership styles will be required to work effectively with followers with different characteristics or in different situations.

## Review Questions

1. Theories of leadership differ in terms of how adaptable they suggest the leader can be. Of the theories discussed in this chapter, choose two that suggest the leader is inflexible and two that suggest the leader is readily adaptable. Which of these two conflicting perspectives seems more likely to be true? Are leaders born or are they made?
2. Most of the early research on leadership involved leaders who were almost exclusively white and male. Demographic research suggests that increasingly fewer of the new entrants in the labor force will be white males. Which theories of leadership may need to be seriously reexamined because of this change? Which do you feel will generalize well to the new workforce?

3. This chapter discussed the least preferred co-worker scale. Although no such instrument exists, what if there were a least preferred leader scale? Who would be your least preferred leader? Why? Can you think of followers other than yourself, or situations other than the one you face, for which this person might be an excellent leader?
4. Although we can think of a few exceptions, in general people who achieve preeminence as leaders in business organizations do not achieve success as political leaders. What are some characteristics of leaders, followers, or situations that make this kind of transition difficult?

Part IV

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# Macro Organizational Behavior

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# Power, Politics, and Conflict

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**P**ower, politics, and conflict in organizations can increase productivity and efficiency—or reduce them substantially. Political processes can even determine organizational existence and strategic direction. Restructuring, often stimulated as much by internal power struggles as by external market conditions, is prompting managers to search out new strategic directions for their firms. In the process, political considerations are altering the careers of thousands of employees—both managers and nonmanagers. At the same time that these events are creating opportunities for some, they are costing many others their jobs.<sup>1</sup> Understanding power, politics, and conflict is therefore critical to managerial success—and survival—in today’s business organizations. To provide this understanding, Chapter 11 begins with a discussion of the nature, sources, and consequence of power. Next, it turns to the closely related topic of organizational politics, the process through which people acquire and use power to get their way. Finally, it examines conflict, describing the origins, results, and resolution of political confrontation in organizations.

## Power in Organizations

When asked to define *power*, many people recall master politicians like Great Britain’s wartime prime minister Winston Churchill or former U.S. president Bill Clinton describing power as the ability to influence the behaviors of others and persuade them to do things they would not otherwise do.<sup>2</sup> For other people, images of the less powerful come to mind, leading them to define power as the ability to avoid others’ attempts to influence their behavior. In truth, both of these views are correct. That is, **power** is the ability both to influence the conduct of others and to resist unwanted influence in return.<sup>3</sup>

According to David McClelland, people are driven to gain and use power by a need for power—which he called *nPow*—that is learned during childhood and adolescence.<sup>4</sup> This need for power can have several different effects on the way people think and behave. Generally speaking, people with high *nPow* are competitive, aggressive, prestige-conscious, action oriented, and prone to join groups. They are likely to be effective managers if, in addition to pursuing power, they also do the following:

- Use power to accomplish organizational goals instead of using it to satisfy personal interests.
- Coach subordinates and use participatory management techniques rather than autocratic, authoritarian methods.

- Remain aware of the importance of managing interpersonal relations but avoid developing close relationships with subordinates.<sup>5</sup>

McClelland's research has suggested that seeking power and using it to influence others are not activities to be shunned or avoided in and of themselves. In fact, the process of management *requires* that power be used.

### Interpersonal Sources of Power

If management requires the use of power, then what is the source of a manager's power? In their pioneering research, John French and Bertram Raven sought to answer this question by identifying the major bases, or sources, of power in organizations.<sup>6</sup> As indicated in Table 11.1, they discovered five types of power: reward, coercive, legitimate, referent, and expert power.

**Reward power** is based on the ability to allocate desirable outcomes—either the receipt of positive things or the elimination of negative things. Praise, promotions, raises, desirable job assignments, and time off from work are outcomes that managers often control. If they can make decisions about the distribution of such rewards, managers can use them to acquire and maintain reward power. Similarly, eliminating unwanted outcomes, such as unpleasant working conditions or mandatory overtime, can be used to reward employees. For instance, police officers who receive clerical support to help complete crime reports generally look at this reduction of paperwork as rewarding.

Whereas reward power controls the allocation of desirable outcomes, **coercive power** is based on the distribution of undesirable outcomes—either the receipt of something negative or the removal of something positive. People who control punishing outcomes can get others to conform to their wishes by threatening to penalize them in some way. That is, coercive power exploits fear. To influence subordinates' behaviors, managers may resort to punishments such as public scoldings, assignment of undesirable tasks, loss of pay, or, taken to the extreme, layoffs, demotions, or dismissals.

**Legitimate power** is based on norms, values, and beliefs that teach that particular people have the legitimate right to govern or influence others. From childhood, people learn to accept the commands of authority figures—first parents, then teachers, and finally bosses. This well-learned lesson gives people with authority the power to influence other people's attitudes and behaviors. In most organizations, authority is distributed in the form of a hierarchy (Chapter 2). People who hold positions of hierarchical authority are accorded legitimate power by virtue of the fact that they are office holders. For example, the vice president of marketing at a firm such as Philip Morris issues orders and expects people in subordinate positions to obey them because of the clout that being a vice president affords.

Table 11.1 Five Types of Power and Their Sources

Type of power	Source of power
Reward	Control over rewarding outcomes
Coercive	Control over punishing outcomes
Legitimate	Occupation of legitimate position of authority
Referent	Attractiveness, charisma
Expert	Expertise, knowledge, talent

Have you ever admired a teacher, a student leader, or someone else whose personality, way of interacting with other people, values, goals, or other characteristics were exceptionally attractive? If so, you probably wanted to develop and maintain a close, continuing relationship with that person. This desire can provide this individual with **referent power**. Someone you hold in such esteem is likely to influence you through his or her attitudes and behaviors. In time you may come to identify with the admired person to such an extent that you begin to think and act alike. Referent power is also called *charismatic power*.

Famous religious leaders and political figures often develop and use referent power. Mahatma Gandhi, John F. Kennedy, Martin Luther King, Jr., and Nelson Mandela, for example, have all used personal charisma to profoundly influence the thoughts and behaviors of others. Of course, referent power can also be put to more prosaic use. Consider advertising's use of famous athletes and actors to help sell products. Athletic shoe manufacturers such as Nike, Reebok, and Adidas, for example, employ sports celebrities as spokespeople in an effort to influence consumers to buy their products. Similarly, movie producers try to ensure the success of their films by including well-known stars in the cast.

**Expert power** derives from the possession of expertise, knowledge, and talent. People who are seen as experts in a particular area can influence others in two ways. First, they can provide other people with knowledge that enables or causes those individuals to change their attitudes or behavior. For example, media critics provide reviews that shape people's attitudes about new books, movies, music, and television shows. Second, experts can demand conformity to their wishes as the price for sharing their knowledge. For instance, doctors, lawyers, and accountants provide advice that influences their clients' choices. Auto mechanics, plumbers, and electricians also exert a great deal of influence over customers who are not themselves talented craftspeople.

### Conformity Responses to Interpersonal Power

How do employees respond when managers use the different kinds of power identified by French and Raven? According to Herbert Kelman, three distinctly different types of reactions are likely to occur as people respond to attempts to influence their behavior. As indicated in Table 11.2, they are compliance, identification, and internalization.<sup>7</sup>

*Compliance* ensues when people conform to the wishes or directives of others so as to acquire favorable outcomes for themselves in return. They adopt new attitudes and behaviors not because these choices are agreeable or personally fulfilling but rather because they lead to specific rewards and approval or head off specific punishments and disapproval. People are likely to continue to display such behaviors only as long as the favorable outcomes remain contingent on conformity.

**Table 11.2** Three Responses to Interpersonal Power

Level	Description
Compliance	Conformity based on desire to gain rewards or avoid punishment. Continues as long as rewards are received or punishment is withheld.
Identification	Conformity based on attractiveness of the influencer. Continues as long as a relationship with the influencer can be maintained.
Internalization	Conformity based on the intrinsically satisfying nature of adopted attitudes or behaviors. Continues as long as satisfaction continues.

Of the various types of power identified by French and Raven, reward and coercive power are the most likely to stimulate compliance, because both are based on linking employee performance with the receipt of positive or negative outcomes. Employees who work harder because a supervisor with reward power has promised them incentive payments are displaying compliance behavior. Similarly, employees who work harder to avoid punishments administered by a supervisor with coercive power are likely to continue doing so only while the threat of punishment remains salient.

*Identification* occurs when people accept the direction or influence of others because they identify with the power holders and seek to maintain relationships with them—not because they value or even agree with what they have been asked to do. French and Raven's concept of referent power is based on the same sort of personal attractiveness as is identification. Consequently, referent power and identification are likely to be closely associated with each other. Charismatic leaders are able to continue influencing other people's behaviors for as long as identification continues.

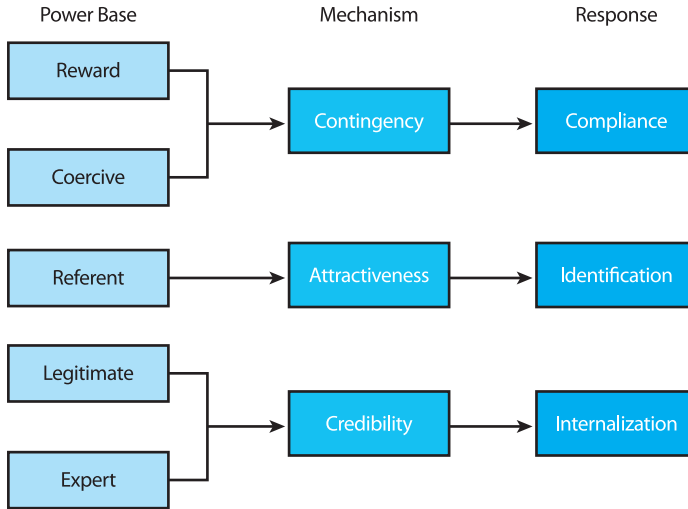
Finally, through *internalization*, people may adopt others' attitudes and behaviors because this course of action satisfies their personal needs or because they find those attitudes and behaviors to be congruent with their own personal values. In either case, they accept the power holders' influence wholeheartedly. Both legitimate and expert power can stimulate internalization, as these forms of power rely on personal credibility—the extent to which a person is perceived as truly possessing authority or expertise. This credibility can be used to convince people of the intrinsic importance of the attitudes and behaviors they are being asked to adopt.

Internalization leads people to find newly adopted attitudes and behaviors personally rewarding and self-reinforcing. A supervisor who can use her expertise to convince colleagues to use consultative leadership (see Chapter 10) can expect the other managers to continue consulting with their subordinates long after she has withdrawn from the situation. Likewise, a manager whose legitimate power lends credibility to the orders he issues can expect his subordinates to follow those orders even in the absence of rewards, punishments, or charismatic attraction.

### **A Model of Interpersonal Power: Assessment**

French and Raven describe the different kinds of interpersonal power used in organizations, and Kelman identifies how people respond to this use. Although valuable as a tool for understanding power and its consequences, the model integrating these ideas, shown in Figure 11.1, is not entirely without fault. Questions arise as to whether the five bases of power are completely independent, as proposed by French and Raven, or whether they are so closely interrelated as to be virtually indistinguishable from one another. The idea that reward, coercive, and legitimate power often derive from company policies and procedures, for instance, has led some researchers to subsume these three types of power in a single category labeled **organizational power**. Similarly, because expert and referent power are both based on personal expertise or charisma, they have sometimes been lumped together into the category of **personal power**.

In fact, French and Raven's five bases of power may be even more closely interrelated than this categorization would suggest. In their study of two paper mills, Charles Greene and Philip Podsakoff found that changing just one source of managerial power affected employees' perceptions of three other types of power.<sup>8</sup> Initially, both paper mills used an incentive payment plan in which supervisors' monthly performance appraisals determined the employees' pay. At one mill, the incentive plan was changed to an hourly wage system in



**Figure 11.1** A Model of Interpersonal Power

Source: Based on H. C. Kelman, "Compliance, Identification, and Internalization: Three Processes of Attitude Change," *Journal of Conflict Resolution* 2 (1958), 51–60; M. Sussmann and R. P. Vecchio, "A Social Influence Interpretation of Worker Motivation," *Academy of Management Review* 7 (1982), 177–186.

which seniority determined an employee's rate of pay. The existing incentive plan was left in place at the other mill. Following this change, the researchers found that employees at the first mill perceived their supervisors as having significantly less reward power—as we might expect. Surprisingly, however, they also saw significant changes in their supervisors' punishment, legitimate, and referent power. As shown in Figure 11.2, they attributed significantly more punishment power, a little less referent power, and substantially less legitimate power to their supervisors.

In contrast, employees in the second mill, where the incentive plan remained unchanged, reported no significant changes in their perceptions of their supervisors' reward, punishment, legitimate, and referent power. Because all other conditions were held constant in both mills, employees' changed perceptions in the first mill could not be attributed to other unknown factors. Instead, their perceptions of reward, coercive, legitimate, and referent power proved to be closely interrelated. This finding suggests that four of the five types of power identified by French and Raven appear virtually indistinguishable to interested observers.<sup>9</sup>

Despite this limitation, the model created by joining French and Raven's classification scheme with Kelman's theory is useful in analyzing social influence and *interpersonal* power in organizations. Managers can use this model to help predict how subordinates will conform to directives based on a particular type of power. For example, is the use of expertise likely to result in long-term changes in subordinates' behavior? Since the model shown in Figure 11.1 indicates that internalization is stimulated by the use of expert power, long-term behavioral changes are quite probable. Alternatively, subordinates may find the model useful as a means of understanding—and perhaps influencing—the behaviors of their superiors. For instance, an employee interested in influencing his boss to permanently change her style of management would be well advised to try using personal expertise.

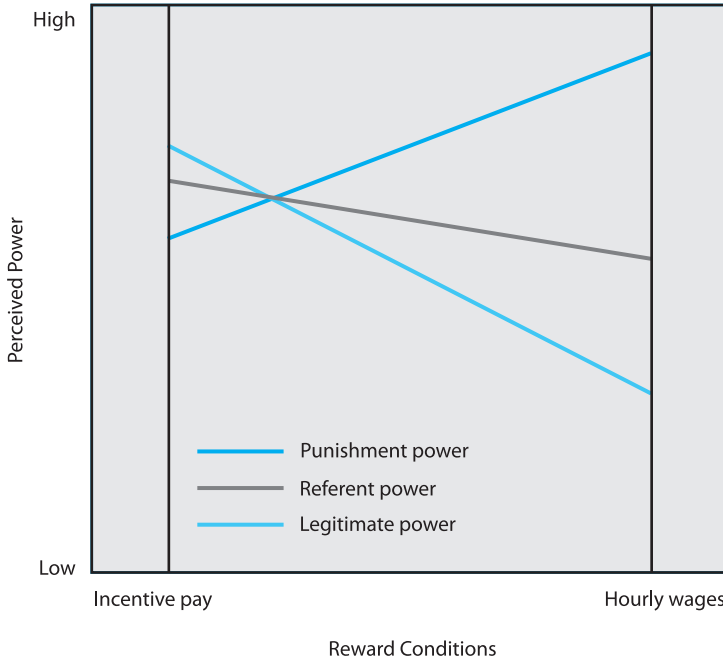


Figure 11.2 Effects of a Change in Method of Payment on Perceived Bases of Power

Source: Based on C. N. Greene and P. M. Podsakoff, “Effects of Withdrawal of a Performance-Contingent Reward on Supervisory Influence and Power,” *Academy of Management Journal* 24 (1981), 527–542.

### Structural Sources of Power

In addition to the interpersonal sources discussed so far, power also derives from the *structure* of patterned work activities and flows of information found in every organization. Chapter 12 will examine the topic of organizational structure in detail. The discussion here will, therefore, be limited to those characteristics of organizations that shape power relations—uncertainty reduction, substitutability, and centrality. As depicted in Figure 11.3, these three variables combine to form the critical contingencies model of power.<sup>10</sup>

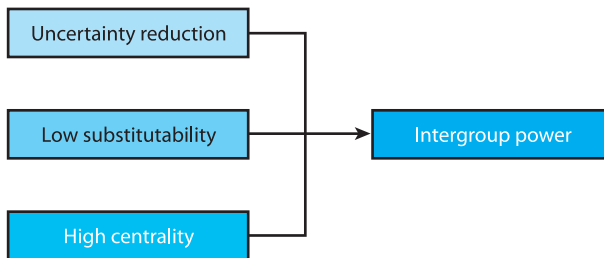


Figure 11.3 The Critical Contingencies Model of Power

Source: Based on D. J. Hickson, C. R. Hinings, C. A. Lee, R. H. Schneck, and J. M. Pennings, “A Strategic Contingencies Theory of Intraorganizational Power,” *Administrative Science Quarterly* 16 (1971), 216–229.

### Uncertainty Reduction

**Critical contingencies** are the things that an organization and its various parts need to accomplish organizational goals and continue surviving. The raw materials needed by a company to manufacture goods are critical contingencies. So, too, are the employees who make these goods, the customers who buy them, and the banks that provide loans to buy inventory and equipment. Information can also be a critical contingency.

Consider the financial data used by banks to decide whether to grant loans, or the mailing lists employed by catalog merchandisers to locate prospective customers. Uncertainty about the continued availability of such critical contingencies can threaten the organization's well-being. If a purchasing manager cannot be certain that she can buy raw materials at reasonable prices, then her organization's ability to start or continue productive work is compromised. Similarly, when a marketing department reports shifting consumer tastes, the firm's ability to sell what it has produced is threatened. Thus, as explained by Gerald Salancik and Jeffrey Pfeffer, the critical contingencies model of power is based on the principle that "those [individuals or groups] most able to cope with [their] organization's critical problems and uncertainties acquire power"<sup>11</sup> by trading *uncertainty reduction* for whatever they want in return.

One way to reduce uncertainty is by gaining *resource control*—that is, by acquiring and maintaining access to those resources that might otherwise be difficult to obtain.<sup>12</sup> A human resources management department may be able to reduce an important source of uncertainty in an organization that has experienced problems in attracting qualified employees if it can hire and retain a productive workforce. Similarly, a purchasing department that can negotiate discounts on raw materials can help reduce uncertainty related to whether the firm can afford to continue to produce its line of goods. Each of these departments, by delivering crucial resources and thereby reducing success-threatening uncertainty, can gain power.<sup>13</sup>

*Information control* offers another way to reduce uncertainty in organizations. Providing information about critical contingencies is particularly useful when such information can be used to predict or prevent threats to organizational operations.<sup>14</sup> Suppose, for example, that a telecommunication company's legal department learns of impending legislation that will restrict the company's ability to buy additional television stations unless it divests itself of the stations it already owns. By alerting management and recommending ways to form subsidiary companies to allow continued growth, the firm's legal department may eliminate much uncertainty for the firm.

A third way to reduce uncertainty is to acquire *decision-making control*—that is, to have input into the initial decisions about what sorts of resources will be critical contingencies. At any time, events may conspire to give certain groups power over others. This power, in turn, allows its possessors to determine the rules of the game or to decide such basic issues as what the company will produce, to whom it will market the product, and what kinds of materials, skills, and procedures will be needed. In the process, those already in power can make the contingencies they manage even more important to organizational well-being. In this manner, power can be used to acquire power of even greater magnitude—"the rich get richer."<sup>15</sup>

### Substitutability

Whether individuals or groups gain power as a result of their success in reducing uncertainty depends partly on their **substitutability**. If others can serve as substitutes and reduce the same sort of uncertainty, then individuals or departments that need help in coping with



uncertainty can turn to a variety of sources for aid. Hence no single source is likely to acquire much power under such a scenario. For example, a legal department's ability to interpret laws and regulations is unlikely to yield power for the department if legal specialists working in other departments can fulfill the same function. When substitutes are readily available, other departments can ignore the pressures of any particular group, so each group's ability to amass power is undermined.

If others can get help in coping with uncertainty only from the target person or group, however, this person or group is clearly in a position to barter uncertainty reduction for desired outcomes. For example, a research and development group that serves as a company's sole source of new product ideas can threaten to reduce the flow of innovation if the firm does not provide the desired resources. The less substitutability present in a situation, the more likely that a particular person or group will be able to amass power.<sup>16</sup>

### *Centrality*

The ability of a person or a group to acquire power is also influenced by its **centrality**, or its position within the flow of work in the organization.<sup>17</sup> The ability to reduce uncertainty is unlikely to affect a group's power if no one outside the group knows that it has this ability and no one inside the group recognizes the importance of the ability. Simply because few other people know of its existence, a clerical staff located on the periphery of a company is unlikely to amass much power, even if its typing and filing activities bring it in direct contact with critically important information. When uncertainty emerges that the staff could help resolve, it is likely to be ignored because no one is aware of the knowledge and abilities possessed by the staff members.

### **The Critical Contingencies Model: Assessment**

Despite a few criticisms,<sup>18</sup> research strongly supports the critical contingencies model's suggestion that power is a function of uncertainty reduction, substitutability, and centrality. An analysis of British manufacturing firms in business during the first half of the 20th century confirms this idea.<sup>19</sup> The analysis revealed that accounting departments dominated organizational decision making in the Great Depression era preceding World War II, because they kept costs down at a time when money was scarce. After the war ended, power shifted to purchasing departments as money became more readily available and strong consumer demand made access to plentiful supplies of raw materials more important. During the 1950s, demand dropped so precipitously that marketing became the most important problem facing British firms. As a result (and as predicted by the model), marketing and sales departments that succeeded in increasing company sales gained power over important decision-making processes.

In another study, researchers examined 29 departments of the University of Illinois, looking at the departments' national reputations, teaching loads, and financial receipts from outside contracts and grants.<sup>20</sup> Their results indicated that each department's ability to influence university decision making was directly related to its reputation, teaching load, and grant contributions.

In addition, the amount of contract and grant money brought in from outside sources had an especially strong effect on departmental power. Contracts and grants provide operating funds critical to the survival of a public institution such as the University of Illinois. Thus, as predicted by the critical contingencies model, the power of each department in the university was directly related to its ability to contribute to the management of critical contingencies.

An even more intriguing piece of evidence supporting the critical contingencies model was discovered by Michel Crozier, a French sociologist who studied a government-owned tobacco company located just outside Paris.<sup>21</sup> As described by Crozier, maintenance mechanics in the tobacco company sought control over their working lives by refusing to share knowledge needed to repair crucial production equipment. The mechanics memorized repair manuals and then threw them away so that no one else could refer to them. In addition, they refused to let production employees or supervisors watch as they repaired the company's machines. They also trained their replacements in a closely guarded apprenticeship process, thereby ensuring that outsiders could not learn what they knew. Some mechanics even altered equipment so completely that the original manufacturer could not figure out how it worked. In this manner, the tobacco company's maintenance mechanics retained absolute control over the information and skill required to repair production equipment. In essence, the maintenance personnel ran the production facility as a result of the information they alone possessed about its equipment.

Crozier's account of the tobacco factory mechanics illustrates the usefulness of the critical contingencies model in explaining why people who have hierarchical authority and formal power sometimes lack the influence needed to manage workplace activities. If subordinates have the knowledge, skills, or abilities required to manage critical contingencies, thereby reducing troublesome uncertainties, they may gain enough power to disobey their hierarchical superiors. In turn, as long as superiors must depend on subordinates to manage such contingencies, it will be the subordinates—not the superiors—who determine which orders will be followed and which will be ignored.<sup>22</sup>

In sum, the critical contingencies model appears to describe the structural bases of power quite accurately. Its utility for contemporary managers lies in the observation that the roots of power lie in the ability to solve crucial organizational problems. Managers must understand and exploit this simple premise, because such knowledge can help them acquire and keep the power needed to do their jobs.

## Politics and Political Processes

**Politics** can be defined as activities in which individuals or groups engage so as to acquire and use power to advance their own interests. In essence, politics is power in action.<sup>23</sup> Although political behavior can be disruptive, it is not necessarily bad. The unsanctioned, unanticipated changes wrought by politics can, in fact, enhance organizational well-being by ridding companies of familiar but dysfunctional ways of doing things.<sup>24</sup> Nonetheless, because politics has a negative connotation, political behavior is seldom discussed openly in organizations. In fact, managers and employees may even deny that politics influences organizational activities. Research indicates, however, that politicking *does* occur and that it has measurable effects on organizational behavior.<sup>25</sup>

## Personality and Politics

Why do people engage in politics? As with power in general, certain personal characteristics predispose people to exhibit political behaviors. For example, some people have a need for power (nPow), as identified by McClelland and discussed previously. Just as nPow drives people to seek out influence over others, it also motivates them to use this power for political gain.

Other researchers have suggested that people who exhibit the personality characteristic of **Machiavellianism**—the tendency to seek to control other people through opportunistic,

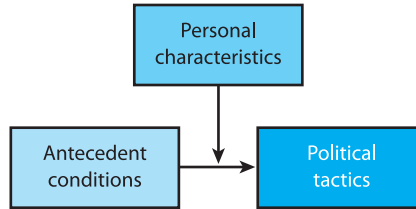


Figure 11.4 A Model of the Emergence of Politics

Source: Based on G. R. Ferris, G. S. Russ, and P. M. Fandt, "Politics in Organizations," in R. A. Giacalone and P. Rosenfield, eds., *Impression Management in the Organization* (Hillsdale, NJ: Erlbaum, 1989), pp. 143–170.

manipulative behaviors—may also be inclined toward politics. In addition, studies have indicated that self-conscious people may be less likely than others to become involved in office politics because they fear being singled out as a focus of public attention and being evaluated negatively for engaging in politics. This fear keeps them from seeking power and using it for personal gain.<sup>26</sup>

### Conditions that Stimulate Politics

In addition to personality characteristics such as nPow and Machiavellianism, certain conditions encourage political activity in organizations (see Figure 11.4). One such condition is *uncertainty* that can be traced to ambiguity and change (see Table 11.3). Uncertainty can hide or disguise people's behaviors, enabling them to engage in political activities that would otherwise be detected and prohibited. It can also trigger political behavior, because it gives people a reason to be political—they may resort to politics in efforts to find ways to reduce uncertainty that provide them with added power and other personal benefits.

Besides uncertainty, other conditions that may encourage political behavior include *organizational size*, *hierarchical level*, *membership heterogeneity*, and *decision importance*. Politicking is more prevalent in larger organizations than in smaller ones. The presence of a greater number of people is more likely to hide the behaviors of any one person, enabling him or her to engage in political behaviors with less fear of discovery. Politics is also more common

Table 11.3 Types of Uncertainty that Encourage Politics

Interruptions in the availability of critical resources or of information about these resources
Ambiguity (no clear meaning) or equivocalty (more than one possible meaning) in the information that is available
Poorly defined goals, objectives, work roles, or performance measures
Unclear rules for such things as who should make decisions, how decisions should be reached, or when decision making should occur
Change of any type—for example, reorganization, budgetary reallocations, or procedural modifications
Dependence on other individuals or groups, especially when that dependence is accompanied by competitiveness or hostility

Source: Based on D. R. Beman and T. W. Sharkey, "The Use and Abuse of Corporate Politics," *Business Horizons* 30 (1987), 26–30; A. Raia, "Power, Politics, and the Human Resource Professional," *Human Resource Planning* 8 (1985), 198–209; J. P. Kotter, "Power, Dependence, and Effective Management," *Harvard Business Review* 53 (1977), 125–136.

among middle and upper managers, because the power required to engage in politics is usually concentrated among managers at these levels. In heterogeneous organizations, members share few interests and values and therefore see things very differently. Under such circumstances, political processes are likely to emerge as members compete to decide whose interests will be satisfied and whose will not. Finally, important decisions stimulate more politics than unimportant decisions do simply because less important issues attract less interest and attention.

### Political Tactics

When personal characteristics and surrounding conditions favor them, a variety of political tactics may surface. Each tactic is intended to increase the power of one person or group relative to others. When power increases, so does the likelihood that the person or group will be able to seek out and acquire self-interested gains.<sup>27</sup>

#### Acquiring Interpersonal Power: Forming Affiliations

Forming **coalitions** or political affiliations with each other represents an important way for people to increase their power and pursue political gain beyond their individual grasp.<sup>28</sup> By banding together, people can share their collective control over rewards or punishments. They can also combine their expertise, legitimacy, and charisma. For instance, collective bargaining enables union members to obtain wages and conditions far superior to those that they could demand as individuals. Conversely, companies form trade associations so as to exchange information about collective bargaining and union agreements.

As part of the process of forming political affiliations, favors may be used to create a sense of indebtedness. People who pursue this tactic can increase the dependence of others by building up a bank of favors that are owed them. In the U.S. Congress, for instance, representatives from industrial regions will vote for bills providing farm subsidies with the understanding that farm-state representatives will reciprocate by supporting bills that secure industrial assistance grants.

Besides exchanging favors, people engaging in politics sometimes use cooptation to preserve their interests in the face of adversity. In **cooptation**, former rivals become transformed into allies, often by involving them in planning and decision-making processes.<sup>29</sup> Colleges and universities often use this tactic during periods of campus unrest, inviting student protesters to join university representatives on administrative committees. Making opponents part of the team often silences their objections, but carries the risk of making major changes in plans and decisions.

Finally, ingratiation and impression management can be used to build and maintain political relationships. *Ingratiation* is the use of praise and compliments to gain the favor or acceptance of others. Similarly, *impression management* involves behaving in ways intended to build a positive image. Both can increase personal attractiveness, thereby raising the likelihood that others will seek a close relationship.<sup>30</sup>

#### Acquiring Structural Power: Controlling Critical Resources

As suggested by the critical contingencies model of power, controlling the supply of a critical resource gives people power over those whose success or survival depends on having that resource. A warehouse manager, for example, can decide which orders will be filled immediately and which will be delayed. As a political tool, power of this sort can be used to ensure

that personal interests are satisfied. Similarly, controlling access to information sources provides power over those who need that information to reduce uncertainty. Political players often attempt to control access to the people who are sources of important information or expertise. Managers, for instance, may shield the staff specialists who advise them from others in their firm. Engineers who are working on new product development are often sequestered from other employees; cost accountants may be separated from other members of a company's accounting department. Such employees are an important resource because they possess critical information that is unavailable elsewhere.

To succeed as a political tactic, controlling access to important resources, information, or people requires eliminating substitutes for these critical resources and discrediting alternative definitions of what is critical. The presence of substitutes counteracts attempts to gain power by controlling critical resources because it neutralizes political efforts. In addition, successful control of critical resources requires that people have at least the centrality needed to identify which resources are critical and which are not.

### *Negative Politics*

If all else fails, a person may sometimes gain the political upper hand by attacking or blaming others, or making them *scapegoats* for failures.<sup>31</sup> Another tactic is to denigrate or belittle others' accomplishments. Either approach involves a direct attack on the interpersonal sources of power that others might possess in an attempt to weaken their political positions, thereby creating doubt about their ability to control rewards and punishments or reducing their credibility, legitimacy, or attractiveness. Negative politicking can also justify the creation of substitute sources of critical resources or information or reduction of the degree of centrality enjoyed by a person or group. After all, who would want an incompetent individual or group in charge of something that is critically important to organizational survival?

### **Managing Destructive Politics**

You can easily imagine some of the consequences when people band together, hoard resources, or belittle each other for no other reason than to get their own way. Morale may suffer; battle lines between contending individuals or groups may impede important interactions; energy that should go into productive activities may instead be spent on planning attacks and counterattacks if politicking is left uncontrolled. For this reason, controlling political behavior is a major part of every manager's job.<sup>32</sup>

### *Set an Example*

One way to manage destructive politics is to set an example. Managers who do not tolerate deceit and dirty tricks and who refuse to engage in negative politics themselves make it clear that such political tactics are inappropriate. Subordinates are thus discouraged from engaging in destructive political activities. In contrast, managers who engage in negative politics—blaming their mistakes on others, keeping critical information from others—convey the message that politics is acceptable. Little wonder, then, that subordinates in such situations are themselves prone to politicking.

### *Communicate Openly*

Sharing all relevant information with co-workers and colleagues can thwart the effects of destructive politics. Managers who communicate openly with their peers, superiors, and

subordinates eliminate the political advantage of withholding information or blocking access to important people. Information that everyone already knows cannot be hoarded or hidden. In addition, open communication ensures that everyone understands and accepts resource allocations. Such understanding eliminates the attractiveness of political maneuvers intended to bias distribution procedures. Shrinking the potential benefits of destructive politicking lessens the incidence of political behaviors.

### *Reduce Uncertainty*

A third way to minimize destructive political behavior is to reduce uncertainty. Clarifying goals, tasks, and responsibilities makes it easier to assess people's behaviors and brings politics out into the open. Expanding decision-making processes by consulting with subordinates or involving them in participatory decision-making processes helps make the resulting decisions understandable and discourages undercover politicking.

### *Manage Informal Coalitions and Cliques*

Managing informal coalitions and cliques can also help reduce destructive politics. Influencing the norms and beliefs that steer group behaviors can ensure that employees continue to serve organizational interests. When cliques resist less severe techniques, job reassignment becomes a viable option. Group politicking is thereby abolished by eliminating the group.

### *Confront Political Game Players*

A fifth approach to managing politics is to confront political game players about their activities. When people engage in politics despite initial attempts to discourage them from this course of action, a private meeting between superior and subordinate may be enough to curb the subordinate's political pursuits. If not, disciplinary measures may become necessary. Punishments such as a public reprimand or a period of layoff without pay ensure that the costs of politicking outweigh its benefits. If this approach does not work, managers who must cope with damaging politics may have no choice except to dismiss political game players.

### *Anticipate the Emergence of Damaging Politics*

In any effort intended to control political behavior, awareness and anticipation are critical. If managers are aware that circumstances are conducive to politicking, they can try to prevent the emergence of politics. Detection of any of the personal characteristics or favorable conditions discussed earlier should be interpreted as a signal indicating the need for management intervention *before* destructive politics crop up.

## **Conflict in Organizations**

**Conflict**—a process of opposition and confrontation that can occur in organizations between either individuals or groups—occurs when parties exercise power in the pursuit of valued goals or objectives and obstruct the progress of other parties.<sup>33</sup> Key to this definition is the idea that conflict involves the use of power in confrontation, or disputes over clashing interests. Also important is the notion that conflict is a process—something that takes time to unfold, rather than an event that occurs in an instant and then disappears. Finally, to the

extent that obstructing progress threatens effectiveness and performance, the definition implies that conflict is a problem that managers must be able to control.

### Is Conflict Necessarily Bad?

Conflict might seem inherently undesirable. In fact, many of the models of organization and management discussed in Chapter 2 support this view. Classic theorists often likened organizations to machines and portrayed conflict as symptomatic of breakdown of these machines. Managers in the days of Henri Fayol and Frederick Taylor concerned themselves with discovering ways either to avoid conflict or to suppress it as quickly and forcefully as possible.

In contrast, contemporary theorists argue that conflict is not necessarily bad.<sup>34</sup> To be sure, they say, *dysfunctional* conflict—confrontation that hinders progress toward desired goals—does occur. For example, protracted labor strikes leave both managers and employees with bad feelings, cost companies lost revenues and customers, and cost employees lost wages and benefits. Current research, however, suggests that conflict is often *functional*, having positive effects such as the following:

- Conflict can lessen social tensions, helping to stabilize and integrate relationships. If resolved in a way that allows for the discussion and dissipation of disagreements, it can serve as a safety valve that vents pressures built up over time.
- Conflict lets opposing parties express rival claims and provides the opportunity to readjust the allocation of valued resources. Resource pools may thus be consumed more effectively owing to conflict-induced changes.
- Conflict helps maintain the level of stimulation or activation required to function innovatively. In so doing, it can serve as a source of motivation to seek adaptive change.
- Conflict supplies feedback about the state of interdependencies and power distributions in an organization's structure. The distribution of power required to coordinate work activities then becomes more clearly apparent and readily understood.
- Conflict can help provide a sense of identity and purpose by clarifying differences and boundaries between individuals or groups. Such outcomes are discussed in greater detail later in this chapter.<sup>35</sup>

At the very least, conflict can serve as a red flag signaling the need for change. Believing that conflict can have positive effects, contemporary managers try to manage or resolve disagreements rather than avoid or suppress them.

### Conditions that Stimulate Conflict

For conflict to occur, three key conditions must exist: interdependence, political indeterminism, and divergence. *Interdependence* is found where individuals, groups, or organizations depend on each other for assistance, information, feedback, or other coordinative relations.<sup>36</sup> As indicated in Chapter 8, four types of interdependence—pooled, sequential, reciprocal, and comprehensive—can link parties together. Any such linkages can serve as sources of conflict. For example, two groups that share a pool of funds may fight over who will receive money to buy new office equipment. Similarly, employees organized along a sequential assembly process may disagree about the pace of work. In the absence of interdependence, however, parties have nothing to fight about and, in fact, may not even know of each other's existence.

The emergence of conflict also requires *political indeterminism*, which means that the



political pecking order among individuals or groups is unclear and subject to question. If power relations are unambiguous and stable, and if they are accepted as valid by all parties, appeals to authority will replace conflict, and differences will be resolved in favor of the most powerful. Only a party whose power is uncertain will gamble on winning through conflict rather than by appealing to power and authority. For this reason, individuals and groups in a newly reorganized company are much more likely to engage in conflict than are parties in an organization with a stable hierarchy of authority.

Finally, for conflict to emerge, there must be *divergence*, or differences or disagreements deemed worth fighting over.<sup>37</sup> For example, differences in the functions they perform may lead individuals or groups to have *varying goals*. Table 11.4 describes some differences in the goal orientations of marketing and manufacturing groups. In this example, each group's approach reflects its particular orientation—marketing's focus on customer service, manufacturing's concern with efficient production runs. In such situations, conflicts may occur over whose goals to pursue and whose to ignore.

Individuals and groups may also have different *time orientations*. For example, tasks like making a sale to a regular customer require only short-term planning and can be initiated or altered quite easily. In contrast, tasks like traditional assembly-line manufacturing operations necessitate a longer time frame, because such activities require extensive preplanning and cannot be changed easily once they have begun. Certain tasks, such as the strategic planning activities that plot an organization's future, may even require time frames of several decades. When parties in a firm have different time orientations, conflicts may develop regarding which orientation should regulate task planning and performance.

Often, *resource allocations* among individuals or groups are unequal. Such differences usually stem from the fact that parties must compete with each other to get a share of their organization's resources. When the production department gets new personal computers to help schedule weekly activities, the sales department may find itself forced to do without the new computers it wants for market research. In such instances, someone wins and someone loses, laying the groundwork for additional rounds of conflict.

Another source of conflict may be the practices used to *evaluate* and *reward* groups and their members. Consider, for example, that manufacturing groups are often rewarded for

**Table 11.4** Differences in Goal Orientations: Marketing and Manufacturing

Goal focus	Marketing approach	Manufacturing approach
Product variety	Customers demand variety	Variety causes short, often uneconomical production runs
Capacity limits	Manufacturing capacity limits productivity	Inaccurate sales forecasts limit productivity
Product quality	Reasonable quality should be achievable at a cost that is affordable to customers	Offering options that are difficult to manufacture undermines quality
New products	New products are the firm's lifeblood	Unnecessary design changes are costly
Cost control	High cost undermines the firm's competitive position	Broad variety, fast delivery, high quality, and rapid responsiveness are not possible at low cost

Source: Based on information presented in B. S. Shapiro, "Can Marketing and Manufacturing Coexist?" *Harvard Business Review* 55 (September–October 1977), 104–114.



their efficiency, which is achieved by minimizing the quantity of raw materials consumed in production activities. Sales groups, on the other hand, tend to be rewarded for their flexibility, which sometimes sacrifices efficiency. Conflict often arises in such situations as each group tries to meet its own performance criteria or tries to force others to adopt the same criteria.

In addition, *status discrepancies* invite conflict over stature and position. Although the status of a person or group is generally determined by its position in the organization's hierarchy of authority—with parties higher in the hierarchy having higher status—sometimes other criteria influence status.<sup>38</sup> For instance, a group might argue that its status should depend on the knowledge possessed by its members or that status should be conferred on the basis of such factors as loyalty, seniority, or visibility.

Conflict can emerge in *jurisdictional disputes* when it is unclear who has responsibility for something. For example, if the personnel and employing departments both interview a prospective employee, the two groups may dispute which has the ultimate right to offer employment and which must take the blame if mistakes are made.

Finally, individuals and groups can differ in the *values, assumptions, and general perceptions* that guide their performance. Values held by the members of a production group, which stress easy assembly, for instance, may differ from the values held by the research and development staff, which favor complex product designs. These values can clash, leading to conflict, whenever researchers must fight for demanding product specifications that production personnel dismiss as unnecessarily complicated.

### Effects of Conflict

Conflict affects relationships among people and groups in many ways. Especially when conflict occurs between groups, several important effects can be predicted to occur within the opposing groups.<sup>39</sup>

First, as noted in Chapter 9, external threats such as intergroup conflict bring about *increased group cohesiveness*. As a result, groups engaged in conflict become more attractive and important to their own members. Ongoing conflict also stimulates an *emphasis on task performance*. All efforts within each conflicting group are directed toward meeting the challenge posed by other groups, and concerns about individual members' satisfaction diminish in importance. A sense of urgency surrounds task performance; defeating the enemy becomes uppermost, and much less loafing occurs.

In addition, when a group faces conflict, otherwise reluctant members will often submit to *autocratic leadership* to manage the crisis, because they perceive participatory decision making as slow and weak. Strong, authoritarian leaders often emerge as a result of this shift. A group in such circumstances is also likely to place much more emphasis on standard procedures and centralized control. As a result, it becomes characterized by *structural rigidity*. By adhering to established rules and creating and strictly enforcing new ones, the group seeks to eliminate any conflicts that might develop among its members and to ensure that it can succeed repeatedly at its task.

Other changes may occur in the relations between conflicting groups. Hostility often surfaces in the form of hardened "*we-they*" attitudes. Each group sees itself as virtuous and the other groups as enemies. Intense dislike often accompanies these negative attitudes. As attitudes within each group become more negative, group members may develop *distorted perceptions* of opposing groups. The resulting negative stereotyping can create even greater differences between groups and further strengthen the cohesiveness within each group.

Eventually, negative attitudes and perceptions of group members may lead to a *decrease in communication* among conflicting groups. The isolation that results merely adds to the

conflict, making resolution even more difficult to achieve. At the same time, conflicting groups often engage in *increased surveillance* intended to provide information about the attitudes, weaknesses, and likely behaviors of other groups.

## Negotiation and Restructuring

A variety of conflict-management techniques have been developed to help resolve conflicts and deal with the kinds of negative effects just described. In general, these techniques are of two types: bargaining and negotiation procedures that focus on managing *divergence* among the interests of conflicting parties, and restructuring techniques that focus on managing *interdependence* between conflicting individuals and groups.

### Managing Diverging Interests

Bargaining and negotiation are two closely associated processes that are often employed to work out the differences in interests and concerns that generate conflict. **Bargaining** between conflicting parties consists of offers, counteroffers, and concessions exchanged in a search for some mutually acceptable resolution. **Negotiation**, in turn, is the process in which the parties decide what each will give and take in this exchange.<sup>40</sup>

In the business world, relations between management and labor are often the focus of bargaining and negotiation. Both processes also occur elsewhere in organizations, however, as people and groups try to satisfy their own desires and control the extent to which they must sacrifice so as to satisfy others. In tight economies, for example, groups of secretaries who are dependent on the same supply budget may have to bargain with each other to see who will get new office equipment and who will have to make do with existing equipment. A company's sales force may try to negotiate favorable delivery dates for its best clients by offering manufacturing personnel leeway in meeting deadlines for other customers' orders.

In deciding which conflicting interests will be satisfied, parties engaged in bargaining and negotiation can choose the degree to which they will assert themselves and look after their own interests. They can also decide whether they will cooperate with their adversary and put its interests ahead of their own. Five general approaches to managing divergent interests exist that are characterized by different mixes of assertiveness and cooperativeness:<sup>41</sup>

1. *Competition* (assertive, uncooperative) means overpowering other parties in the conflict and promoting one's own concerns at the other parties' expense. One way to accomplish this aim is by resorting to authority to satisfy one's own concerns. Thus the head of a group of account executives may appeal to the director of advertising to protect the group's turf from intrusions by other account execs.
2. *Accommodation* (unassertive, cooperative) allows other parties to satisfy their own concerns at the expense of one's own interests. Differences are smoothed over to maintain superficial harmony. A purchasing department that fails to meet budgetary guidelines because it deliberately overspends on raw materials in an effort to satisfy the demands of production groups is trying to use accommodation to cope with conflict.
3. *Avoidance* (unassertive, uncooperative) requires staying neutral at all costs or refusing to take an active role in conflict resolution procedures. The finance department that "sticks its head in the sand," hoping that dissension about budgetary allocations will simply blow over, is exhibiting avoidance.
4. *Collaboration* (assertive, cooperative) attempts to satisfy everyone by working through differences and seeking solutions in which everyone gains. A marketing department and

a manufacturing department that meet on a regular basis to plan mutually acceptable production schedules are collaborating.

5. *Compromise* (midrange assertive, cooperative) seeks partial satisfaction of everyone through exchange and sacrifice, settling for acceptable rather than optimal resolution. Contract bargaining between union representatives and management typically involves significant compromise by both sides.

As indicated in Table 11.5, the appropriateness of each of these approaches depends on the situation and, in many cases, on the time pressure for a negotiated settlement. Beyond these general alternatives, experts on organizational development have devised an assortment of more specific techniques for conflict management that are based on structured sessions of bargaining and negotiation. Several of these techniques will be described in detail in Chapter 14, which deals with culture, change, and organization development.

**Managing Structural Interdependence**

In addition to divergence in interests, conflict requires interdependence. It can therefore be managed or resolved by restructuring the connections that tie conflicting parties together.<sup>42</sup>

*Table 11.5* Application of Different Styles of Managing Divergence

Style	Application
Competing	When quick, decisive action is required. On important issues where unpopular solutions must be implemented. On issues vital to organizational welfare when your group is certain that its position is correct. Against groups that take advantage of noncompetitive behavior.
Accommodating	When your group is wrong and wants to show reasonableness. When issues are more important to groups other than yours. To bank favors for later issues. To minimize losses when your group is outmatched and losing. When harmony and stability are especially important.
Avoiding	When a conflict is trivial or unimportant. When there is no chance that your group will satisfy its own needs. When the costs of potential disruption outweigh the benefits of resolution. To let groups cool down and gain perspective. When others can resolve the conflict more effectively.
Collaborating	To find an integrative solution when conflicting concerns are too important to be compromised. When the most important objective is to learn. To combine the ideas of people with different perspectives. To gain commitment through the development of consensus. To work through conflicting feelings between groups.
Compromising	When group concerns are important but not worth the disruption associated with more assertive styles. When equally powerful groups are committed to pursuing mutually exclusive concerns. To achieve temporary settlements. To arrive at expedient resolutions under time pressure. As a backup when neither competing nor problem-solving styles are successful.

One way to accomplish this goal is to *develop superordinate goals*, identifying and pursuing a set of performance targets that conflicting parties can achieve only by working together. Sharing a common goal requires the parties to look beyond their differences and learn to cooperate with each other. In the automobile industry, for instance, unions and management, fearing plant closures, have forgone adversarial relations to strengthen the competitiveness of automotive firms. In many companies, teamwork has replaced conflict in the pursuit of the superordinate goal of producing high-quality products for today's world markets.

*Expanding the supply of critical resources* is another way to restructure. This strategy removes a major source of conflict between individuals and groups that draw from the same supply. Pools of critical resources are not easily enlarged—which is what makes them critical, of course. When this method is successful, it decreases the amount of interdependence between parties, which then compete less for available resources. For example, one way to eliminate interoffice conflicts over the availability of shared computers is to buy a network of personal computers for every department. Some organizations purchase large quantities of used computers at reduced prices instead of a few new ones at full retail price.

A third way to manage conflict by restructuring interdependence is to *clarify existing relationships* and make the political position of each party readily apparent. If it is feasible, this political clarification affects interdependence by strengthening everyone's understanding of how and why they are connected. It also reduces the political indeterminism that must exist for conflict to occur.

A fourth approach is to *modify existing structural relationships*. This strategy includes a number of mechanisms that either uncouple conflicting parties or modify the structural linkage between them.<sup>43</sup> Two such mechanisms—the **decoupling mechanisms** of slack resources and self-contained tasks—manage conflict by eliminating the interdependence that must exist for conflict to occur.

*Slack resources* help decouple otherwise interconnected individuals and groups by creating buffers that lessen the ability of one party to affect the activities of another. Suppose one person assembles telephone handsets, and another person connects finished handsets to telephone bodies to form fully assembled units. The two employees are sequentially interdependent, because the second person's ability to perform the work is contingent on the first person's ability to complete the task. The second employee cannot work if the first employee stops producing. If a buffer inventory is created—a supply of finished handsets—on which the second worker can draw when the first worker is not producing anything, we have (at least temporarily) decoupled the two individuals.

In contrast, the creation of *self-contained tasks* involves combining the work of two or more interdependent parties and then assigning this work to several independent parties. If the original parties are groups, then the self-contained groups are usually staffed by employees drawn from each of the interdependent groups. For example, engineering and drafting groups might have problems coordinating engineering specifications and the drawings produced by the drafting group. These two groups might be re-formed into several independent engineering–drafting groups. After this restructuring, the original two groups no longer exist. Key interdependencies that lie outside the original groups are contained within redesigned groups and can be managed without crossing group boundaries or involving outside managers.

Sometimes concerns about minimizing inventory costs rule out the use of slack resources. Among U.S. manufacturers, for instance, the cost of carrying excessive inventory is a major concern and has stimulated increasing interest in just-in-time (JIT) procedures. Using JIT, inventory is acquired only as needed, eliminating the cost of having unused items lying around. In addition, work often cannot be divided into self-contained tasks. For example, the

task of producing the parts required to make a car and assembling them into a final product is so immense that many individuals and groups (in fact, many companies) must be involved. In such cases, existing structural relationships may be modified instead by means of various **unit-linking mechanisms**.

*Network information systems* are one such mechanism. These systems consist of mainframe computers with remote terminals or network servers connected to personal computers that can be used to input and exchange information about organizational performance. If you have taken courses in computer science, you have probably worked with a computer network similar to the *intranets* now used in businesses. Managers use such systems to communicate among themselves and to store information for later review. The networks facilitate the transfer of large amounts of information up and down an organization's hierarchy of authority. In addition, they support lateral exchanges among interdependent individuals and groups. In the process, they facilitate communication that might otherwise develop into misunderstandings and lead to conflict. The fact that many organizations have recently added the corporate position of chief information officer (CIO) reflects the growing use of network information systems to manage interdependent, potentially conflictful relationships.<sup>44</sup>

A second type of unit-linking mechanism consists of several *lateral linkage devices* that managers can use to strengthen communication between interdependent parties. In one of these, an employee may be assigned a *liaison position* in which he or she is responsible for seeing that communications flow directly and freely between interdependent groups. The liaison position represents an alternative to hierarchical communication channels. It reduces both the time needed to communicate between groups and the amount of information distortion likely to occur. The person occupying a liaison position has no authority to issue direct orders, but rather serves as a neutral third party and relies on negotiation, bargaining, and persuasion. This person is called on to mediate between groups if conflict actually emerges, resolving differences and moving the groups toward voluntary intergroup coordination.<sup>45</sup>

The liaison position is the least costly of the lateral linkage devices. Because one person handles the task of coordination, minimal resources are diverted from the primary task of production. In addition, because the position has no formal authority, it is the least disruptive of normal hierarchical relationships. Sometimes, however, a liaison position is not strong enough to manage interdependence relations. Managers then have the option of turning to another type of lateral linkage device, *representative groups*, to coordinate activities among interdependent parties. Representative groups consist of people who represent the interdependent individuals or groups, and who meet to coordinate the interdependent activities.

Two kinds of representative groups exist. One, called a *task force*, is formed to complete a specific task or project and then disbanded. Representatives get together, talk out the differences among the parties they represent, and resolve conflicts before they become manifest. For this reason, companies such as Colgate-Palmolive and Procter & Gamble form product task groups by drawing together members from advertising, marketing, manufacturing, and product research departments. Each product task group identifies consumer needs, designs new products that respond to these needs, and manages their market introduction. Once a new product is successfully launched, the product task group responsible for its introduction is dissolved, and its members return to their former jobs.

The other type of representative group is a more or less permanent structure. Like the members of the task force, the members of this group, called a *standing committee*, represent interdependent parties, but they meet on a regular basis to discuss and resolve ongoing problems. The standing committee is not assigned a specific task, nor is it expected to disband at any particular time. An example of a standing committee is a factory's Monday morning production meeting. At that meeting, representatives from production control, purchasing,

quality assurance, shipping, and various assembly groups overview the week's production schedule and try to anticipate problems.

Like task forces, standing committees use face-to-face communication to manage interdependence problems and resolve conflict-related differences. Despite their usefulness in this regard, both of these linkage devices are more costly than the liaison position. Through process loss, their group meetings inevitably consume otherwise productive resources. In addition, because representative groups (especially task forces) are sometimes designed to operate outside customary hierarchical channels, they can prove quite disruptive to normal management procedures.

When neither liaison positions nor representative groups solve intergroup conflict problems, the company may use a third type of lateral linkage device, called an *integrating manager*. Like the liaison position, the integrating manager mediates between interdependent parties. Unlike the liaison position, however, this individual has the formal authority to issue orders and expect obedience. He or she can tell interdependent parties what to do to resolve conflict. Project managers at companies such as Rockwell International and Lockheed fill the role of integrating manager. They oversee the progress of a project by ensuring that the various planning, designing, assembling, and testing groups work together successfully.

Normally, when coordinating the efforts of groups, an integrating manager issues orders only to group supervisors. Giving orders to the people who report to these supervisors might confuse employees, as employees might feel that they were being asked to report to two supervisors. Because an integrating manager disrupts normal hierarchical relationships by short-circuiting the relationships between the group supervisors and their usual superior, this device is used much less often than either the liaison position or representative groups.

Occasionally, even integrating managers cannot provide the guidance needed to manage conflict through structural means. In these rare instances, a fourth type of lateral linkage device, called the *matrix organization structure*, is sometimes employed. Matrix structures are the most complicated of the mechanisms used to coordinate group activities and resolve intergroup conflicts, and they are extremely costly to sustain.<sup>46</sup> The matrix organization structure will be discussed in greater detail in Chapter 12, which covers organization structure, because it is both a conflict resolution device and a specific type of structure. For now, we conclude by suggesting that matrix structures are appropriate only when all other intergroup mechanisms have proved ineffective.

## Summary

*Power* is the ability to influence others and to resist their influence in return. Compliance, identification, and internalization are outcomes that may result from the use of five types of interpersonal power—*reward*, *coercive*, *legitimate*, *referent*, and *expert* power. Power also grows out of uncertainty surrounding the continued availability of *critical contingencies*. It is therefore based on the ability to *reduce this uncertainty* and is enhanced by low *substitutability* and high *centrality*.

*Politics* is a process through which a person acquires power and uses it to advance the individual's self-interests. It is stimulated by a combination of personal characteristics and antecedent conditions and can involve a variety of tactics, ranging from controlling supplies of critical resources to attacking or blaming others. Several techniques are employed to manage politicking, including setting an example and confronting political game players.

*Conflict* is a process of opposition and confrontation that requires the presence of interdependence, political indeterminism, and divergence. It can be managed through *bargaining*

and *negotiation*, or it can be resolved by restructuring interdependence relations through the use of various *decoupling* or *unit-linking mechanisms*.

### Review Questions

1. Is power being exercised when a manager orders a subordinate to do something the subordinate would do even without being ordered? When a subordinate successfully refuses to follow orders? When a manager's orders are followed despite the subordinate's reluctance?
2. How does uncertainty encourage politics? What can managers do to control this antecedent condition?
3. Why does intergroup conflict require interdependence? How does political indeterminism influence whether this sort of conflict will occur? Based on your answers to these two questions, how can managers resolve intergroup conflicts without attempting to reduce divergence?
4. How does an integrating manager differ from a liaison position? Which of the two is more likely to prove successful in resolving a longstanding conflict? Given your answer, why isn't this "stronger" approach the only option used in organizations?

# Structuring the Organization

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Whether it is as well known as Exxon Mobil or Hewlett-Packard or as anonymous as a locally owned convenience store, every organization is composed of a system of interrelated jobs. This **organization structure** comprises a relatively stable network of interconnections or interdependencies among the different people and tasks that make up an organization.<sup>1</sup> Like the steel framework of a building or the skeletal system of the human body, an organization's structure differentiates among its parts even as it helps to keep those parts interconnected. In so doing, it creates and reinforces relationships of interdependence among the people and groups within it. Balancing this structural *integration* and *differentiation* is an important challenge facing current-day managers. The ability to create a workable balance between the two can determine whether a company succeeds in organizing work activities in a way that allows something meaningful to be accomplished.<sup>2</sup>

An organization's structure enables the people within it to work together, thereby accomplishing things beyond the abilities of unorganized individuals. To help their employees achieve this feat in the most effective manner, managers must know how to structure their organization in a way that will enhance employee performance, control the costs of doing business, and keep the organization abreast of changes in the surrounding environment. They must therefore understand the basic design and specific features of the various types of structures they might choose to implement in their company, and they must be aware of the likely advantages and disadvantages of each structural type.

To cultivate this understanding and awareness, this chapter introduces the basic elements of an organization's structure—how coordination is established among interdependent people and jobs, how teams and groups are formed through departmentation and joined together in a hierarchy, and how information and decision making are distributed within this hierarchy so as to stimulate continued coordination and maintain effective interdependence. Using these basic elements, the chapter then describes a variety of types of structure that an organization might adopt, and it examines some of the strengths and weaknesses of each structural type. After studying this chapter, you should be able to recognize a wide range of structural features and organization structures, and you should understand the most important advantages and disadvantages of each of the different structural types.

## Structural Coordination

Achieving structural integration is an important challenge facing all managers, requiring them to make decisions about how to coordinate relationships among the interdependent people and groups they manage. *Coordination* is a process through which otherwise disorganized



actions become integrated so as to produce a desired result. For example, if appropriately coordinated, different parts of the human body work together to produce complex behaviors. The arms follow a trajectory plotted by the eyes so as to catch a ball. The hands hold a car's steering wheel at the same time that the foot depresses the accelerator pedal. It would be very difficult—if not impossible—to catch a ball without first seeing it and judging its path. It would be dangerous to accelerate or even move the car without being able to coordinate the control of its direction.

In a similar manner, through coordination the members of an organization are able to work together to accomplish outcomes that would otherwise be beyond the abilities of any one person working alone. The primary means by which organizational activities are integrated—the **basic coordination mechanisms** of mutual adjustment, direct supervision, and standardization—enable the organization to perform complex activities by bringing together the efforts of many individuals.<sup>3</sup>

### Basic Coordination Mechanisms

**Mutual adjustment** is coordination accomplished through person-to-person communication processes in which co-workers share job-related information.<sup>4</sup> The simplest of the three basic coordination mechanisms, it consists of the exchange among co-workers of knowledge about how a job should be done and who should do it. A group of factory maintenance mechanics examining service manuals and discussing how to fix a broken conveyor belt is coordinating job efforts by means of mutual adjustment. Similarly, sales managers meeting together to discuss their company's market position are using mutual adjustment to coordinate among themselves. In both of these examples, information is exchanged among people who can exercise at least partial control over the tasks they are discussing. Unless the co-workers doing the communicating possess this control, they cannot successfully coordinate their activities with mutual adjustment.

Until fairly recently, virtually all of the mutual adjustment in an organization occurred via face-to-face communication among neighboring co-workers. This situation has changed, however, with the advent of local area networks (LANs) and *intranets*, or Internet-like communication networks within organizations. Within company intranets, employees can use *electronic conferencing* and *chat rooms* to coordinate work activities even though they might be separated by great distance. Both are real-time procedures that require participation at the same point in time but not necessarily in the same physical location. Thus, instead of having to limit mutual adjustment to their colleagues in close physical proximity, intranet-connected co-workers can work together to determine what must be done and decide how to do it without succumbing to the deleterious effects of significant geographic separation.

In addition, time need not stand in the way of coordinating via mutual adjustment. Intranet mechanisms such as *e-mail* and *electronic bulletin boards* (EBBs) are asynchronous communication devices, meaning that people need not be in the same place or work at the same time to “talk” with one another. Thus, e-mail or bulletin board postings can accomplish the same coordination among employees who work at different times or on different shifts that otherwise would require coordination by other means.

With intranet-mediated mutual adjustment, employees who need to communicate with one another to coordinate work activities can send and receive e-mail messages without physically meeting. Workers who need information about a particular product, customer, or technology to determine how to perform their tasks can consult EBBs on the company intranet. In electronic conference rooms, employees can communicate with one another about job problems and fixes without ever meeting face to face. Interdependence that might

otherwise prove difficult or impossible to coordinate can be organized effectively and maintained with relatively little effort.<sup>5</sup>

**Direct supervision**, a second type of coordination mechanism, occurs when one person takes responsibility for the work of a group of others.<sup>6</sup> As part of this responsibility, a direct supervisor acquires the authority to decide which tasks must be performed, who will perform them, and how they will be linked to produce the desired result. A direct supervisor can then issue orders to subordinates, verify that these orders have been followed, and redirect subordinates as needed to fulfill additional work requirements. The owner of a grocery store is functioning as a direct supervisor when, having instructed an employee to restock the shelves, she finds that the clerk has completed the job and directs him next to change the signs advertising the week's specials. In this example, as in every instance of direct supervision, an individual with the authority to issue direct orders is able to coordinate activities by telling subordinates what to do.

**Standardization**, a third type of coordination mechanism, is itself a collection of four different mechanisms that coordinate work by providing employees with standards and procedures that help them determine how to perform their tasks, thereby alleviating their need to communicate with one another or consult their supervisor to find out what to do. Coordination via standardization requires that standards be set and procedures designed—in the process of *formalization*, or the development of formal, written specifications—before the work is actually undertaken.<sup>7</sup> So long as formalized, “drawing-board” plans are followed and the work situation remains essentially unchanged, interdependent relationships can be reproduced and coordination can be sustained.

One form of standardization, *behavioral standardization*, involves specification of the behaviors or work processes that employees must perform in order to accomplish their jobs. Some of these behaviors link each job with other jobs in the organization, such as the requirement that the holder of an assembly-line job place finished items on a conveyor that transports them to other employees for further work. In this way, the need for other types of coordination among jobs is reduced. Behavioral standardization originates in the process of *formalization by job*, also called *job analysis*, in which the sequence of steps required to perform each job is identified and documented in writing. The written documentation is referred to as a *job description*. At the corporate offices of Burger King, for example, job analysts develop procedures manuals containing job descriptions that specify how long company employees should cook each type of food served, what condiments should be used to flavor the food, and how workers should package the food for purchase.

*Output standardization*, a second type of standardization, involves the formal designation of output targets or performance goals. So long as everyone coordinated by output standardization accomplishes his or her goals, the work that is handed off from one employee to the next remains consistent and no one needs to engage in further coordination. The process of establishing written targets and goals is sometimes called *formalization by work flow*, because it produces standards that coordinate interdependence by directing and stabilizing the flow of work in a firm—as exemplified by the set of standards for display-screen brightness, keyboard responsiveness, and exterior appearance prepared for workers who assemble notebook computers.

Unlike employees working under behavioral standardization, people coordinated by output standardization are free to decide for themselves *how* to attain their goals. For instance, posted monthly sales goals indicate levels of performance that insurance sales representatives are expected to achieve, but do not specify particular behaviors required to achieve them. Consequently, output standardization allows a degree of autonomy not permitted by behavioral standardization. As indicated in Chapters 5 through 7, this difference is important

because autonomy can have positive effects on employee motivation, satisfaction, and success at work.

A third type of standardization, *skill standardization*, relies on the specification of skills, knowledge, and abilities needed to perform tasks competently. Skilled employees seldom need to communicate with one another to figure out what to do, and they can usually predict with reasonable accuracy what other similarly skilled employees will do. Consequently, on jobs staffed by such employees, there may be much less need to coordinate in other ways among people and jobs.

Skill standardization can be implemented in either of two ways: by hiring professionals from outside the organization or by training employees already working within the firm. As part of their education, *professionals* learn a generalized code of conduct that shapes their behavior on the job, enriching or in some cases replacing the local rules and regulations of the employing firm. As a result, professionals can be brought into a firm to perform work for which useful written specifications do not exist or cannot be prepared.<sup>8</sup> In contrast, in *training*, the knowledge and skills needed to perform the work of an organization are acquired within the organization itself. Such training, as provided by the employing organization, is purposely organization-specific and often job-specific.

Because skill standardization is aimed at regulating characteristics of people rather than jobs, it is used most often in situations where neither behaviors nor output standards can be easily specified. Few experts agree, for example, on the precise behaviors in which high school teachers should engage while teaching. In addition, general consensus exists that the output indicators for the job of teaching, such as course grades and standardized test scores, have questionable validity as measures of teaching success: grades can be artificially inflated and test scores can be influenced by pretest coaching. For this reason, instead of specifying expected behaviors or outputs, school districts often mandate that their teachers be certified by a state agency. Achieving such certification typically requires that teachers not only hold certain educational degrees, but also provide evidence of having acquired specific knowledge and skills. As a result, all teachers hired by a school district that requires state certification should possess a more or less standardized set of job qualifications or skills and be similarly able to perform their jobs.

Finally, *norm standardization* is present when the members of a group or organization share a set of beliefs about the acceptability of particular types of behavior, leading them to behave in ways that are generally approved. At Honda, for example, corporate norms promote the importance of producing high-quality automobiles. Workers on Honda's U.S. lines who adopt these norms as their own do not need to be directed by a supervisor to produce high-quality products. Instead, the norms of the larger company influence them to behave in ways that enhance product quality. Accepting shared norms and behaving accordingly reduce the need to coordinate activities in other ways, because they increase the likelihood that people will behave appropriately and consistently over time.

As described in Chapter 8, organizations use *socialization* to teach important behavioral norms to employees, particularly newcomers. To the extent that these norms regulate activities required to coordinate the flow of work, coordination by norm standardization can be enacted without formalized written rules and procedures. This approach lies at the heart of the system of coordination used in many companies in Japan and South Korea. Asian companies use practices such as reciting company mottos before beginning work each day or singing company songs during social outings after work to constantly remind employees of the firms' norms and to ensure compliance with these norms. In less obvious forms, norm standardization is cropping up with increasing frequency in North American organizations. For instance, at Hewlett-Packard employees learn the history of their company. Along the

way, they hear stories about the company's founders and early management that illustrate which behaviors are presently considered appropriate at Hewlett-Packard and which are not. In addition to being entertaining, these stories promote important company norms.

### Choosing among the Mechanisms

Managers charged with managing an organization's structure continually confront the need to make choices among the basic coordination mechanisms summarized in Table 12.1. In most situations, two or more of these mechanisms are used concurrently to integrate work activities in and among the groups in an organization. In such instances, one serves as the primary mechanism used to solve most coordination problems. The others, if present, serve as secondary mechanisms that supplement the primary mechanism, backing it up in case it fails to provide enough integration.

Managers must decide which mechanism will serve as the primary means of coordination and which (if any) will act as secondary mechanisms. In general, two factors influence such choices: the number of people whose efforts must be coordinated to ensure the successful performance of interdependent tasks, and the relative stability of the situation in which the tasks must be performed.<sup>9</sup> In small groups, containing 12 or fewer people, coordination is often accomplished by everyone doing what comes naturally. Employees communicate face to face, using mutual adjustment to fit their individual task behaviors into the group's overall network of interdependence. No other coordination mechanism is needed, and none is used. Family farms and neighborhood restaurants are often organized around this type of coordination.

Suppose, however, that a group includes more than 12 people—as many as 20, 30, or even 40—who use mutual adjustment alone to coordinate their activities. As depicted in Figure 12.1, the number of needed communication links rises geometrically as the number of individuals rises arithmetically; that is, although two people need only one link, three people need three links, six people need 15 links, and so on. Clearly, the members of larger groups must spend so much time communicating with one another that very little time is left for task completion. This sort of *process loss* (discussed in Chapter 9) diminishes group productivity in such instances.

**Table 12.1** Basic Coordination Mechanisms

<i>Mechanism</i>	<i>Definition</i>
Mutual adjustment	Face-to-face communication in which co-workers exchange information about work procedures
Direct supervision	Direction and coordination of the work of a group by one person who issues direct orders to the group's members
Standardization	Planning and implementation of standards and procedures that regulate work performance
Behavior standardization	Specification of sequences of task behaviors or work processes
Output standardization	Establishment of goals or desired end results of task performance
Skill standardization	Specification of the abilities, knowledge, and skills required by a particular task
Norm standardization	Encouragement of attitudes and beliefs that lead to desired behaviors






Number of People	Number of Links	Group Configuration
2	1	
3	3	
4	6	
5	10	
6	15	

Figure 12.1 Group Size and Mutual Adjustment Links

For this reason, direct supervision is typically employed instead of mutual adjustment in larger groups as the primary means of coordinating group activities. In communicating information to subordinates, the direct supervisor acts as a proxy for the group as a whole. To use an analogy, the direct supervisor functions like a switching mechanism that routes telephone messages from callers to receivers. The supervisor originates direct orders and collects performance feedback, while channeling information from one interdependent group member to another.

In such situations, mutual adjustment serves as a supplementary coordination mechanism: When the direct supervisor is unavailable or does not know how to solve a particular problem, employees communicate among themselves to try to figure out what to do and how to do it. Besides clarifying how direct supervision functions as a basic coordination mechanism, the telephone-switching analogy helps to explain the failure of direct supervision to coordinate the activities of members in even larger groups (for example, groups containing 50 or more individuals). Just as a switching mechanism can become overloaded by an avalanche of telephone calls, in successively larger groups the direct supervisor becomes increasingly burdened by the need to obtain information and channel it to the appropriate people. Ultimately, he or she will succumb to information overload, failing to keep up with subordinates' demands for information and coordination.

At this point, standardization is likely to replace supervision as the primary means of coordination. Coordination by standardization can prevent information overload by greatly reducing or eliminating the amount of communication needed for effective coordination. In this type of system, workers perform specified task behaviors, produce specified task outputs, use specified task skills, or conform to specified workplace norms. Thanks to the guidance provided by such standardization, members of very large groups can complete complex, interdependent networks of task activities with little or no need for further coordination.

Where standardization serves as the primary means of coordination, direct supervision and mutual adjustment remain available for use as secondary coordination mechanisms. On an assembly line, for instance, direct supervision may be used to ensure that workers adhere to formal behavioral standards. Mutual adjustment may also be employed on the assembly line to cope with machine breakdowns, power outages, or other temporary situations in which standard operating procedures are ineffective and direct supervision proves insufficient.

Standardization requires stability. If the conditions envisioned during the planning of a particular standardization program change, the program's utility may be lost. For example, behavioral specifications that detail computerized check-in procedures are likely to offer few benefits to hotel-registration personnel who face a long line of guests and a dead computer screen. Mutual adjustment often reemerges in such instances, assuming the role of the primary basic coordination device. The process loss associated with mutual adjustment in these situations is simply tolerated as a necessary cost of staying in business.

The three means of coordination form a continuum, as depicted in Figure 12.2.<sup>10</sup> As coordination needs progress from left to right along the continuum, mechanisms to the left are not completely abandoned. All the way to the right end of the continuum, standardization, direct supervision, and secondary mutual adjustment remain available to supplement the mutual adjustment that serves as the primary means of coordination.

A critical trade-off exists between the *costs* of using a particular mechanism and the *flexibility* it permits. Mutual adjustment, especially through face-to-face communication, requires neither extensive planning nor the hierarchical differentiation of an organization's membership into supervisors and subordinates. Therefore, it affords a high degree of flexibility. Although each new use of mutual adjustment generates new coordination costs that tend to be modest initially, over time these costs can add up and become quite significant. They may take the form of time, effort, and similar resources that are consumed by communication activities and thus must be diverted away from task-related endeavors.

In contrast, the initial costs of standardization are quite high. The process of developing standards and procedures often requires the services of highly paid specialists, and otherwise-productive resources must be diverted toward the design and implementation of standardization programs. Yet, once designed and implemented, such programs no longer consume resources of major significance. The large initial costs of standardization can therefore be amortized—spread over long periods of time and across long production runs. The result is an extremely low cost per incidence of coordination, which is less expensive than mutual adjustment over the long run. As mentioned earlier, however, standardization requires that the work situation remain essentially unchanged, because dynamic conditions would render existing standards obsolete. Thus it lacks the flexibility of mutual adjustment.

The flexibility of direct supervision lies between the extremes associated with mutual adjustment and standardization. Because direct supervision presupposes a hierarchy of authority, it lacks the spontaneity and fluidity of mutual adjustment. Yet, because it requires much less planning than standardization, direct supervision is more flexible. Not surprisingly, its coordination costs also fall between those of mutual adjustment and standardization. Although direct supervision requires fewer costly communication links than

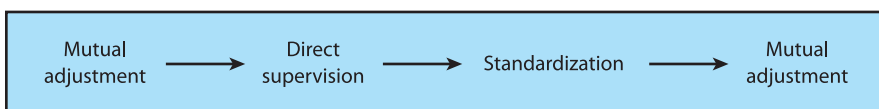


Figure 12.2 Continuum of Coordination Mechanisms

mutual adjustment, new coordination costs are generated for every supervisory action taken owing to the process loss that still occurs.

### Departmentation

In addition to deciding how to coordinate interdependent activities, managers shaping an organization’s structure must determine how to cluster the groups or teams produced via group formation. As indicated in Chapter 9, managers can form groups of co-workers on the basis of *functional* similarities, resulting in efficient but relatively inflexible groups of functional specialists. Alternatively, they can create groups based on *work flow* similarities, producing flexible but relatively inefficient teams that blur functional distinctions. Managers apply much the same logic to the job of linking the resulting groups together into a larger organization. The result consists of two types of **departmentation**.<sup>11</sup>

To illustrate these two alternatives, think of an organization that consists of four functional areas—marketing, research, manufacturing, and accounting—and three product lines—automobiles, trucks, and small gasoline engines. Figure 12.3 depicts this firm. In the figure, each box represents one of the four functions. Each of the horizontal work flows, represented by a series of arrows, stands for one of the three product lines. Dashed lines illustrate the alternative forms of departmentation.

The upper diagram in Figure 12.3 shows one type of departmentation, called *functional departmentation*. It is the equivalent of functional grouping but, rather than forming groups of individuals, the focus here is on forming groups that are themselves composed of groups. In the diagram, all marketing groups are combined into a single marketing department, all research groups are combined into a single research department, and so forth.

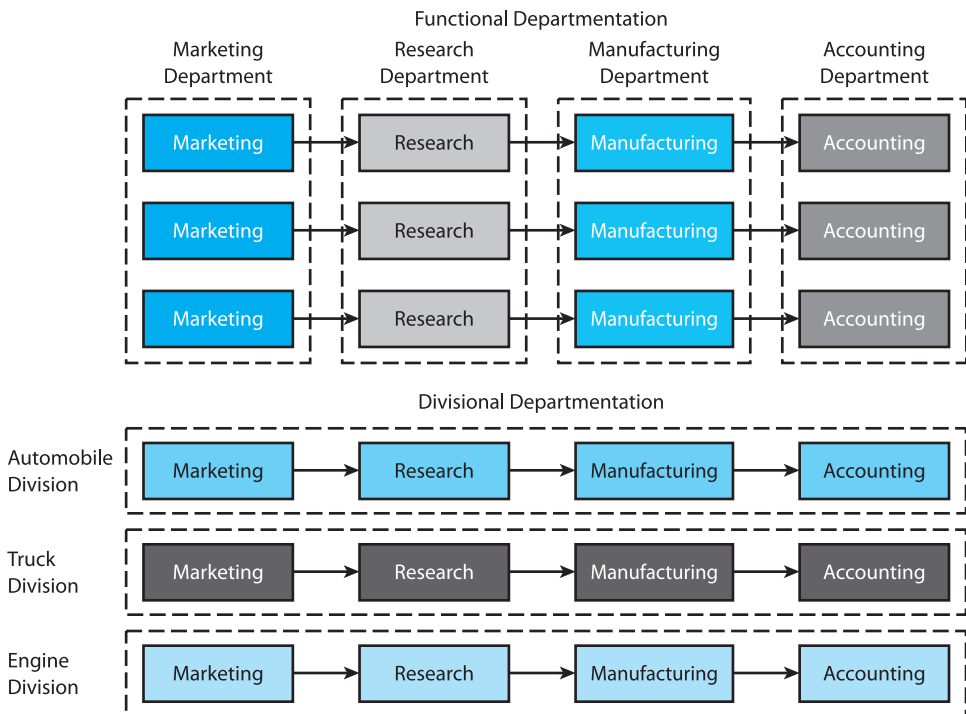


Figure 12.3 Types of Departmentation

As with functional grouping, the *departments* that result from functional departmentation are economically efficient. In each department, members can trade information about their functional specialty and improve their skills. Managers can also reduce overstaffing or duplication of effort by reassigning redundant employees elsewhere in the firm. Changes to any of the product lines crossing a particular department, however, require reorganization of the entire department. In other words, departments lack the flexibility to deal easily with change.

In contrast, the second type of departmentation shown in the lower diagram of Figure 12.3, called *divisional departmentation*, is equivalent to using work flow grouping to cluster groups together into larger units. Instead of being grouped into marketing, manufacturing, research, and accounting departments, the organization's activities are grouped into product divisions—an automobile division, a truck division, and a gasoline engine division. Alternatively, when an organization's clients differ more dramatically than its products, the organization's work may be grouped based on differences in the clients served. For instance, the company might include a military contracts division, a wholesale distribution division, and an aftermarket parts division. Following a third approach, an organization with operations spread throughout the world may be grouped geographically, into a North American division, an Asian division, and a European division.

Any of these alternatives offers the organization division-by-division flexibility. Each division can tailor its response to the unique demands of its own market. For example, Toyota's Lexus might decide to redesign its luxury market automobiles to be more conservative without worrying about the effects of this move on other Toyota products and markets. Some of the economic efficiency of functional departmentation is sacrificed, however, because effort is duplicated across the organization's various product lines. Lexus's product design studios duplicate those of Toyota, but the two studios cannot be consolidated without losing divisional flexibility. As with group formation, managers making divisional departmentation decisions face a trade-off between economy and flexibility.

By clustering related groups, departmentation of either type accentuates similarities that facilitate the management of intergroup relations. Specifically, in an organization structured around functional departmentation, groups in the same department share the same specialized knowledge, language, and ways of looking at the company's business. For instance, the members of a marketing department all share the same general marketing know-how. They discuss topics such as market segmentation and market share, and they generally agree that the best way to ensure their company's success is by appealing to customer needs. A manager charged with coordinating different groups in the marketing department can base his or her actions on this common knowledge, language, and viewpoint despite having to deal with several different groups of employees. Thus the manager can manage them using the same basic management approach.

Similarly, in an organization structured around divisional departmentation, groups in the same division share interests in the same basic line of business. Thus all employees in the truck division of a company like General Motors or Ford are concerned about doing well in the truck industry. This commonality allows the manager of a division to treat groups performing different functions—marketing, manufacturing, research, and so forth—in much the same way, without having to tailor management practices to the functional specialty of each particular group.

Nonetheless, whether functional or divisional departmentation is used, the process of clustering related groups together also creates gaps or discontinuities between the resulting departments or divisions. In many instances, the kinds of conflict described in Chapter 11 may arise where these gaps occur. As indicated in that chapter, unit-linking mechanisms—ranging from intranets to matrix structuring—can be deployed to manage and resolve such conflicts.



## Hierarchy and Centralization

A **hierarchy** reflects the differentiation of rank that occurs as group formation processes and departmentation procedures work together to create clusters of groups and layers of managers having responsibility for the activities of particular clusters. In Figure 12.4A, each of the small squares represents an assembly-line employee who works on one of the company's four lines, located in two separate buildings. Work groups, one per assembly line, are formed by grouping each line's workers together into a single group. In return, these groups are clustered into two larger groups, paralleling the two buildings that house assembly operations. Finally, these two "groups of groups" are themselves clustered together into a single assembly department. Figure 12.4B depicts the same pattern of clustering, but diagrams it in the familiar "organization chart" form that accentuates the presence of a hierarchy.

Once formed, a hierarchy can be used to control intergroup relations. A manager having hierarchical authority over a particular collection of groups can use this authority to issue orders that, when followed, will help coordinate activities among those groups. For instance, the manager having hierarchical authority over all manufacturing groups of the company depicted in the upper diagram in Figure 12.3 can use that authority to smooth the flow of information among groups of manufacturing employees formed through functional departmentation. Alternatively, the manager of the automobile division shown in the lower diagram in Figure 12.3 can facilitate work flows among employees in the divisions created through divisional departmentation. In turn, interdependencies that span different departments or divisions can be coordinated by managers higher in the organization's hierarchy. For example, problems between the manufacturing department and the marketing, research, or accounting departments shown in the upper diagram can be handled by the executive responsible for overseeing the various department managers. Hierarchical authority, then, can be used to coordinate relations among groups by extending the scope of direct supervision.

The use of hierarchy to coordinate intergroup relations differs from one organization to the next in terms of which level of managers—top, middle, or supervisory—has the ultimate authority to make decisions and issue orders. Left to their own devices, many top managers in

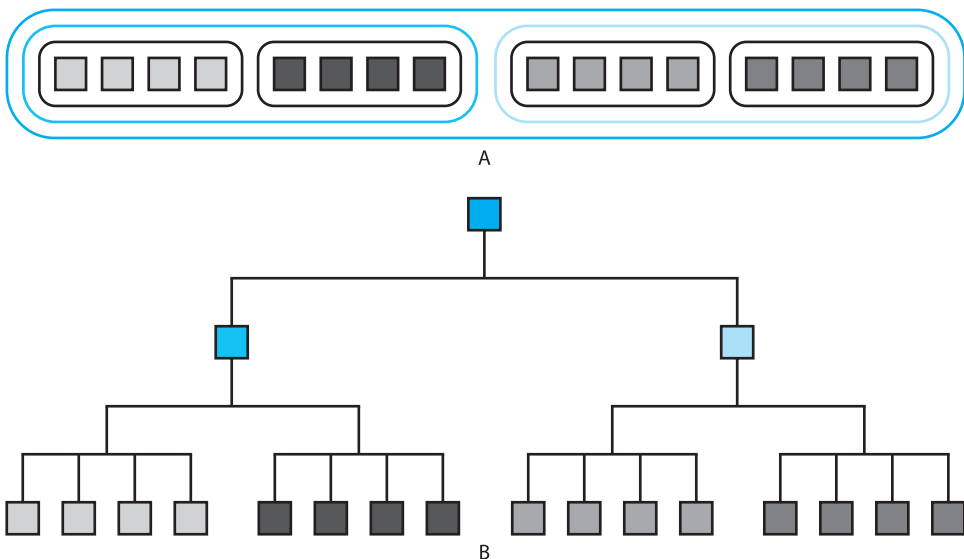


Figure 12.4 How Grouping Creates a Hierarchy

North America would favor **centralization**, or the concentration of authority and decision making at the top of a firm.<sup>12</sup> Centralization affords top managers a high degree of certainty. Because they alone make the decisions in centralized firms, they can be sure not only that decisions are made, but also that those decisions are made in accordance with their own wishes. In addition, centralization can minimize the time needed to make decisions, because few people are involved in the decision-making process.

However, **decentralization** has become increasingly common in modern organizations. In decentralized organizations, authority and decision making are dispersed downward and outward in the hierarchy of managers and employees. Several factors push otherwise reluctant top managers toward its implementation. First, some decisions require top managers to weigh a great deal of information. Managers may become overloaded by the task of processing this vast amount of information and therefore find it useful to involve more people in the decision-making process. Second, decentralization may be stimulated by a need for flexibility. If local conditions require that different parts of an organization respond differently, managers of those organizational groups must be empowered to make their own decisions. Third, decentralization may prove useful in dealing with employee motivation problems if those problems can be solved by granting employees control over workplace practices and conditions. In any of these cases, the failure to decentralize can seriously undermine attempts to coordinate intergroup relations.

## Types of Organization Structure

The choice to emphasize standardization as a primary means of coordination leads to the creation of a bureaucratic organization structure. As noted in Chapter 2, Weber's bureaucracy is a form of organization in which rules, regulations, and standards are written down and used to govern member behaviors. In contrast, the choice to place primary emphasis on either of the other means of coordination also entails the choice to bypass bureaucracy or minimize its presence in a firm. Between complete bureaucracy and no bureaucracy lies a continuum of structures, each incorporating specific configurations of departmentation and centralization. These different structures are described next.

### Prebureaucratic Structures

As their name suggests, **prebureaucratic structures** lack the standardization that is the defining characteristic of bureaucracies. They can be used successfully only in organizations so small in size and so simple in purpose that mutual adjustment or direct supervision provides the coordination needed to maintain interdependence.

In one type of prebureaucratic structure, the **simple undifferentiated structure**, coordination is accomplished solely by mutual adjustment. That is, co-workers interact with one another to determine how to coordinate work among themselves. Because communicating with other people is natural for most of us, mutual adjustment is easy to initiate and relatively simple to sustain. For this reason, simple undifferentiated structures can often be established and perpetuated fairly easily.

As Figure 12.5 suggests, a simple undifferentiated structure lacks a hierarchy of authority. Such a structure is nothing more than an organization of people who decide what to do by communicating with each other as they work. No single individual has the authority to issue orders, and few, if any, written procedures guide performance. A group of friends who decide to open a small restaurant, gift shop, or similar sort of business might, at the outset, adopt this type of structure for the business.

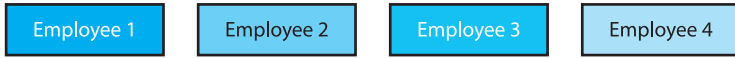


Figure 12.5 The Simple Undifferentiated Structure

The primary strengths of simple undifferentiated structures are their simplicity and extreme flexibility. Especially when they are organized around face-to-face communication, they can develop spontaneously and be reconfigured almost instantly. For example, just as adding another member to a small classroom discussion group is likely to cause only a momentary lapse in the group's activities, adding another worker to a family-run convenience store will have little long-term effect on coordination among the store's workers.

A major weakness of simple undifferentiated structures is their limitation to small organizations. Suppose you are a member in an advertising firm employing 25 or 30 people. It would be difficult or impossible to rely on mutual adjustment alone to ensure that the firm's accounts were properly handled, because process loss would inevitably undermine the usefulness of face-to-face coordination among such a large number of individuals. So many interpersonal links would be required that valuable time and effort would be lost in the struggle to maintain some degree of organization.

A related weakness is the failure of simple undifferentiated structures to provide the coordination needed to accomplish complex tasks. It is unlikely, for example, that a simple undifferentiated structure of 12 or fewer people could succeed at mass-producing automobiles. Complicated work of this sort requires a more complicated form of organization.

In the second type of prebureaucratic structure, the **simple differentiated structure**, direct supervision replaces mutual adjustment as the primary means of coordination. Organizations with simple differentiated structures are a common part of everyday life—a local grocery store or neighborhood gas station, for example. As shown in Figure 12.6, this type of structure is organized as a hierarchy with small but significant amounts of centralization.

One person (usually the firm's owner or the owner's management representative) retains the hierarchical authority needed to coordinate work activities by means of direct supervision. A secondary mechanism, mutual adjustment, is used to deal with coordination problems that direct supervision cannot resolve. For example, while the owner of a small insurance agency is at the post office retrieving the morning mail, clerks in the agency may talk among themselves to decide who will answer the telephone and who will process paperwork until the owner returns.

The simple differentiated structure can coordinate the activities of larger numbers of people than can the simple undifferentiated structure. By shifting to direct supervision, it eliminates some of the process loss associated with reliance on mutual adjustment alone. In addition, because its decision-making powers are centralized in the hands of a single person, an organization with a simple differentiated structure can respond rapidly to changing

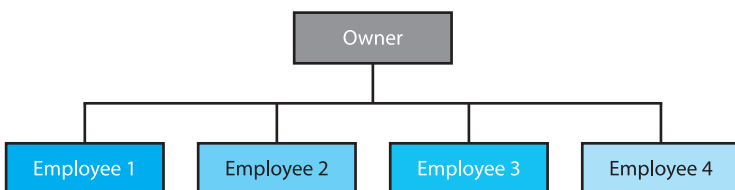


Figure 12.6 The Simple Differentiated Structure

conditions. At the same time, this structure affords a good deal of flexibility because it avoids standardization.

The simple differentiated structure's weaknesses include its inability to coordinate the activities of more than about 50 people and its failure to provide the integration needed to accomplish complex tasks. A group of people is just as unlikely to organize itself to produce cars by using a combination of direct supervision and mutual adjustment as it is to organize itself to carry out such a task by using mutual adjustment alone. A single direct supervisor would soon be overwhelmed by the vast amount of information required to know what cars to produce, which parts to order, how to assemble them properly, and so forth.

### **Bureaucratic Structures**

Both kinds of prebureaucratic structures are likely to be overwhelmed by the coordination requirements of complicated tasks. Some combination of standardization of behaviors, outputs, skills, or norms is required to deal with such tasks, because standardization of any type greatly reduces the amount of information that must be exchanged and the number of decisions that must be made as work is being performed. In the **bureaucratic structures** that arise as standardization emerges as the primary means of coordination, direct supervision and mutual adjustment are retained as secondary mechanisms that take effect when standardization fails to meet all coordination needs. This combination of coordination mechanisms allows organizations with bureaucratic structures to integrate the variety of jobs needed to perform complicated, demanding work.

The **functional structure** is a form of bureaucratic structure adopted by organizations that are larger than the 50 or so members whose activities can be coordinated via a simple differentiated structure, yet not so large that they do business in several different locations or serve widely differing groups of clientele. If your community includes locally owned banks, department stores, or manufacturing plants, chances are good that they have functional structures.

Such structures are characterized by three key attributes. First, because they are bureaucratic structures, functional structures are based on coordination by standardization. Most often they will rely on behavioral standardization, although output standardization is also used in functional structuring. Second, these structures are organized according to functional departmentation. That is, groups within them are clustered into departments that are named for the functions their members perform, such as marketing, manufacturing, or accounting. Third, functional structures are usually centralized. Most, if not all, important decisions are made by one person or a few people at the tops of firms with functional structures—especially decisions related to the formation of organizational goals and objectives.

As Figure 12.7 suggests, one easy way to determine whether a particular firm has a functional structure is to examine the titles held by its vice presidents. If the firm has a bureaucratic structure and all of its vice presidents have titles that indicate what their subordinates do (for example, vice president of manufacturing, vice president of marketing, vice president of research and development), the firm has a functional structure. If one or more vice presidents have other sorts of titles (for instance, vice president of the consumer finance division or vice president of European operations), the firm has another type of structure (described later).

The primary strength of the functional structure is its economic efficiency. Standardization minimizes the long-term costs of coordination. In addition, centralization makes it possible for workers to focus their attention on their work rather than taking time out to make decisions. Functional structures, however, have a critical weakness: They lack significant flexibility. The standardization that provides so much efficiency not only takes lengthy

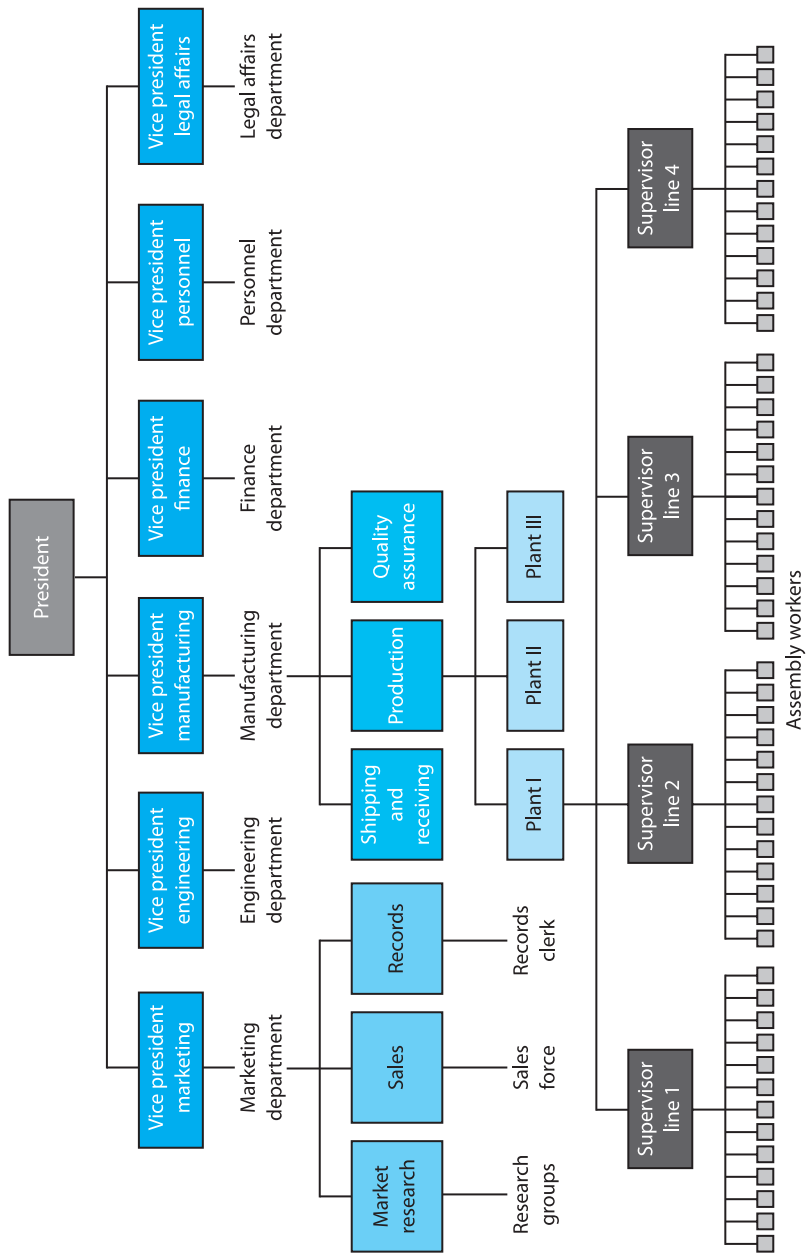


Figure 12.7 The Functional Structure

formalization (planning and documentation) to implement, but also requires that the same standards be followed repeatedly. This inflexibility reduces the functional structure's ability to cope with instability or change. Functional departmentation adds to this rigidity, because changes to any work flow in a company organized by functional departmentation necessarily affect the other work flows in the organization.

A functional structure can coordinate the work of an organization effectively if the firm limits itself to one type of product, manufactures this product in a single geographic location, and sells to no more than a few different types of clients. Of course, many organizations produce multiple types of products, do business in several locations, or seek to serve a wide variety of clients. Such diversity of products, locations, or clients injects variety into the information that a firm needs to make managerial decisions. This variety overloads the centralized decision-making processes on which the functional structure is based. In such situations, other structures can prove more useful.

The **divisional structure** is a second type of bureaucratic structure. As such, it is characterized by standardization of any of several types, most often standardization of behaviors, outputs, or skills. Unlike functional structures, however, divisional structures are moderately decentralized. Decision making is pushed downward by one or two hierarchical layers, so a company's vice presidents and sometimes their immediate subordinates share in the process of digesting information and making key decisions. Divisional departmentation is another feature that distinguishes divisional structures from functional structures. Groups in divisional structures are clustered together according to similarities in products, geographic locations, or clients. For this reason, divisional structures are sometimes called product structures, geographic structures, or market structures.

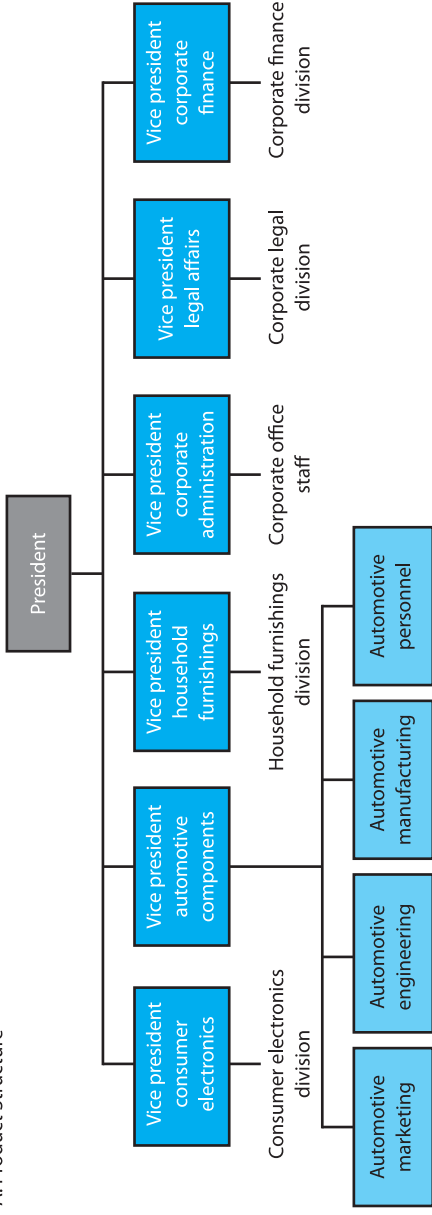
Figure 12.8 depicts three divisional structures, based on product similarities, geographic similarities, and client similarities. Each differs from the functional structure diagrammed in Figure 12.7, since in each of the structures in Figure 12.8 the vice presidential titles of *line* divisions include product, geographic, or client names. Note, however, that vice presidents of *staff* divisions in these divisional structures have titles that sound like functions—for example, vice president of legal affairs or vice president of corporate finance.

The divisional structure's departmentation scheme and moderate decentralization imbue it with a degree of flexibility not found in the functional structure.<sup>13</sup> Each division can react to issues concerning its own product, geographic region, or client group without disturbing the operation of other divisions. It remains securely connected to the rest of the organization, however, and is not allowed to drift away from the overall organization's goals and objectives. For example, the vice president of consumer electronics, shown in the upper panel of Figure 12.8, can make decisions affecting the production and sales of clock radios and steam irons without consulting with the company's president or other vice presidents, but he or she cannot decide to redirect the division into another line of products.

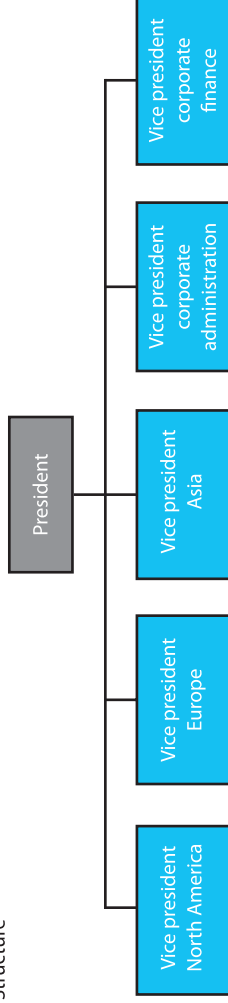
The limited degree of independence afforded the divisions in a divisional structure allows one to stop doing business without seriously interrupting the operations of the others. For example, the division of Boeing that fulfills military contracts could discontinue doing business without affecting work in the firm's civilian aircraft division. Remember, however, that each division in such a structure is itself organized like a functional structure, as indicated in Figure 12.8. As a result, a particular division cannot change products, locations, or clients without incurring serious interruptions in its own internal operations. Thus a decision at Boeing to service NASA contracts in its military division would require substantial reorganization of that division.

The flexibility that is the main strength of divisional structures comes at the price of increased costs arising from duplication of effort across divisions. For example, every division

A. Product Structure



B. Geographic Structure



C. Client Structure

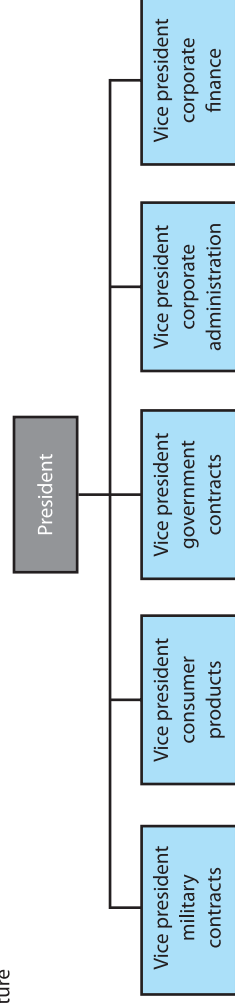


Figure 12.8 Divisional Structures

is likely to have a separate sales force, even though that structure means that salespeople from several different divisions may visit the same customer. The primary weakness of divisional structures is the fact that they are, at best, only moderately efficient.

**Matrix structures**, like divisional structures, are bureaucratic structures adopted by organizations that must integrate work activities related to a variety of products, locations, or customers. However, firms that have implemented matrix structures, such as Monsanto, Prudential Insurance, and Chase Manhattan Bank, need even more flexibility than is possible with divisional structures.<sup>14</sup> They try to achieve this flexibility by reintegrating functional specialists across different product, location, or customer lines. Because matrix structures use functional and divisional departmentation simultaneously to cluster together structural groups, they are also called *simultaneous structures*.

Figure 12.9 illustrates the matrix structure of a firm that has three divisions, each of which manufactures and sells a distinct product line. Each box or unit in the matrix represents a distinct group composed of a small hierarchy of supervisors and one or more structural groups having both functional and divisional responsibilities. For example, Unit 1 is a consumer electronics marketing group, composed of units that market televisions, radios, cellular telephones, and other electronic merchandise. Unit 2 is an automotive components engineering group, consisting of engineering units that design automobile engines, suspensions, steering assemblies, and other such items. Unit 3 is a household products manufacturing group, made up of facilities that produce furniture polishes, floor waxes, window cleaners, and other household supplies. Note that staff groups in a matrix structure are often excluded from the matrix itself. The three staff departments shown in the diagram—personnel, finance, and legal affairs—provide advice to top management but are not parts of the matrix.

Mutual adjustment is the primary means of coordination within the upper layers of a matrix structure, and decision making is decentralized among matrix managers. Both of these characteristics enable top managers to reconfigure relationships among the cells in the matrix, promoting extreme flexibility. Because of their dual responsibilities, each matrix cell has two bosses: a functional boss and a divisional boss. This arrangement violates Fayol's principle of unity of command (Chapter 2). Thus mutual adjustment must also be used in the upper layer of each cell to cope with conflicting orders from above.

Beneath the upper layer of each cell, standardization is used to integrate work activities. Both direct supervision and lower-level mutual adjustment serve as supplementary mechanisms that coordinate cell-level activities. For instance, once managers at the top of the matrix structure shown in Figure 12.9 have decided to manufacture a new kind of floor wax, formalization is used to develop new standards. Standardization is then used to coordinate activities in the units in the household products manufacturing cell that carry out the production of this new product. Direct supervisors help employees learn the new standards and work to correct deficiencies in the standards as they become apparent. In addition, employees engage in mutual adjustment to cope with problems that their supervisor cannot resolve.

As is apparent, a matrix structure basically consists of a simple differentiated structure designed into the upper layers of a bureaucracy—including the president and vice presidents, plus the individuals who manage each of the cells shown in Figure 12.9. This simple structure injects mutual adjustment into an otherwise bureaucratic organization so as to encourage communication, coordination, and flexibility among the managers who oversee organizational operations.

The primary strength of matrix structures derives from their extreme flexibility. They can adjust to changes that would overwhelm other bureaucratic structures. Nonetheless, matrix structures are relatively rare, because they are extremely costly to operate. In part, this costliness stems from the proliferation of managers in matrix firms, as a matrix requires



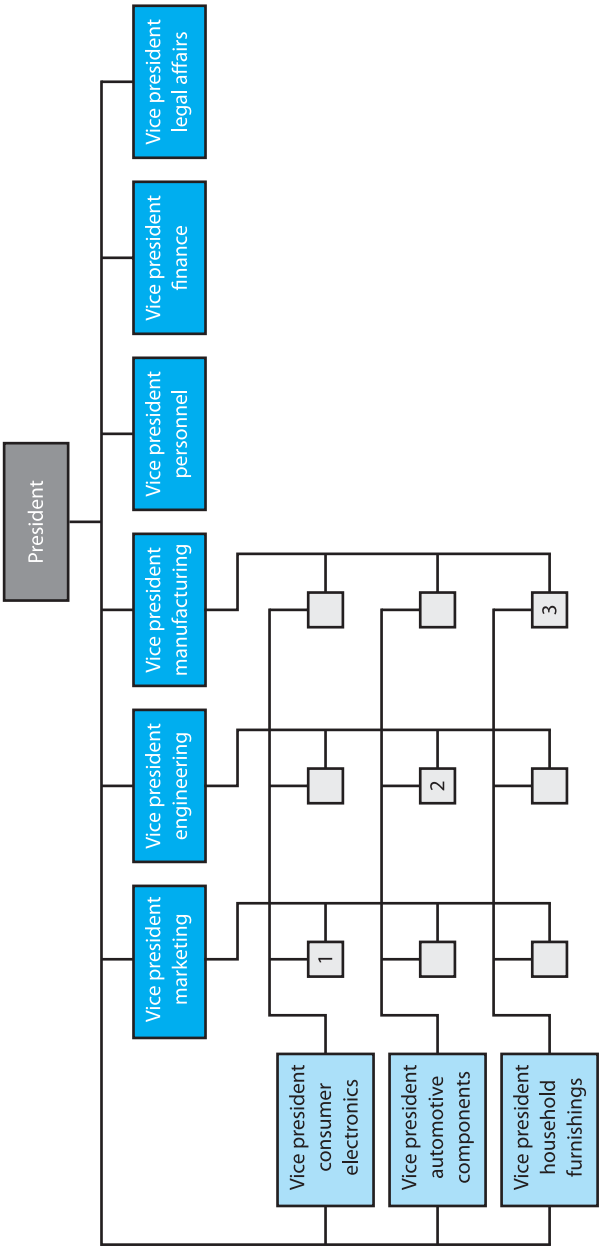


Figure 12.9 The Matrix Structure

two complete sets of vice presidents. Matrix structures also incorporate the same sort of duplication of effort—multiple sales forces, for instance—that make divisional structures so expensive to operate. Moreover, because employees near the top must deal with two bosses and often conflicting orders, working in a matrix can be extremely stressful. This stress can lead to absenteeism, turnover, and ultimately lower productivity and higher human resource costs.<sup>15</sup>

More important, matrix structures are economically inefficient because they rely on mutual adjustment as their primary coordination mechanism, despite extremely costly levels of process loss. Matrix structuring therefore represents the decision to tolerate costly coordination so as to secure high flexibility. Firms that choose matrix structures and function effectively thereafter are generally those that face radical change that would destroy them if they could not easily adapt to their dynamic environment. In effect, they choose the lesser of two evils—the inefficiency of a matrix rather than dissolution. Firms that attempt matrix organization but later abandon it tend not to face the degree of change required to justify the costs of the matrix approach.

A fourth form of bureaucratic structure, the **multiunit structure**, achieves high flexibility in extremely large organizations by decoupling the divisions of an organization rather than by further integrating divisional elements along functional lines, as in a matrix structure. A multiunit structure emerges when the divisions of a divisional structure are permitted to separate themselves from the rest of the organization and develop into autonomous, self-managed business units.<sup>16</sup> Each business unit is allowed to fend for itself, with little or no interference from the *holding unit* that oversees the complete firm. Companies including General Electric, Ford, Xerox, and Alco Standard have variations of this form of structure.<sup>17</sup>

Figure 12.10 shows a multiunit structure. All multiunit structures are organized around divisional departmentation, but each “division” is actually a self-sufficient business concern. Compared with other kinds of bureaucratic structures, multiunit structures are extremely decentralized. Unit managers several levels below the holding unit’s CEO have the authority to define their unit’s purpose and formulate its mission. At the same time, routine activities within each business unit are coordinated as much as possible by standardization, often involving the standardization of skills or norms to control the costs of process loss.

A major strength of the multiunit structure is its ability to provide the coordination required to manage extremely large or complex organizations, albeit in parts, without incurring the high costs of the matrix structure. Unfortunately, multiunit structures suffer from some degree of inefficiency inasmuch as their divisional departmentation means substantial duplication of effort. Another drawback is that multiunit structures are not useful when strong links are needed between the various parts of the organization. For example, it is difficult to imagine organizing a hospital as a multiunit structure. Too many transfers of patients and treatment information are required among the units of a hospital to allow many of them to operate autonomously.

### Postbureaucratic Structures

Within the past 25 years, many organizations have found it necessary to be more flexible than allowed by even the most flexible form of bureaucracy. Some have grown extremely large—employing hundreds of thousands of individuals, producing a tremendous variety of goods or services, and doing business in every corner of the world. Others have found themselves competing in industries characterized by massive change occurring on a continual basis. As a result, attention has turned to forming information-rich organization structures, grounded in

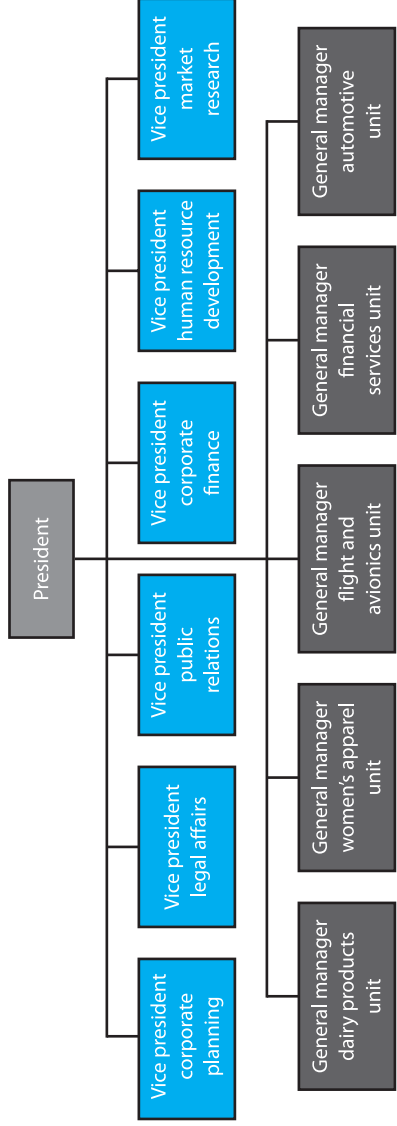


Figure 12.10 The Multinational Structure

computerized communication networks and coordinated by technology-aided mutual adjustment, that can successfully deal with extreme complexity and identify change before it threatens organizational viability. In the process, managers have begun to experiment with two new kinds of **postbureaucratic structures**: modular and virtual structures.

A **modular structure** consists of a collection of autonomous modules or cells interconnected by a computerized intranet.<sup>18</sup> In such structures, self-managing teams, grouped according to process, assume supervisory duties and use mutual adjustment to coordinate internal work activities. An intranet ties teams together horizontally, allowing for mutual adjustment among teams needed to manage interdependent efforts, and provides the vertical information flows required to ensure firmwide collaboration. Computer-mediated networks thus supplant hierarchy and centralization as the primary means of coordinating interdependence among groups.

The modular structure can be quite flexible, as different configurations of modules can be strung together to accomplish the various tasks that might confront a firm. For example, the collection of research, production, and marketing modules assembled in a biotechnology firm to develop and distribute an influenza vaccine can be disbanded and recombined with others to perform research on cell development and market the firm's new anticancer discovery.

Modular flexibility comes at the price of significant process loss, however, owing to the redirection of otherwise productive resources toward self-management activities. This loss is less than that experienced in matrix structures and is viewed as essential to organizational success and survival.

In the **virtual structure**, several organizations attain the performance capacities of a single, much larger firm while retaining extreme flexibility and significant efficiency.<sup>19</sup> The label *virtual structure* is patterned after the term *virtual memory*, which refers to a way of making a computer act as though it has more memory capacity than it actually possesses. Analogously, virtual structuring provides a way to make an organization act as though it has more productive capacity than it actually controls. A structure of this type develops when a company forms a network of alliances with other companies to quickly exploit a business opportunity. Thus a virtual structure is not a single organization, but rather a temporary collection of several organizations.

Levi Strauss, Atlas Industrial Door, and Dell Computer are some of the better-known companies currently implementing aspects of the virtual structuring approach.<sup>20</sup> In virtual structures, each firm focuses on doing the thing it does best—its core competency in design, manufacturing, marketing, or any other necessary function—and together the firms form a “best of everything” organization. During the period of its temporary existence, a virtual structure resembles a loosely coupled functional structure where each “department” is an otherwise autonomous company. Connecting the various companies together is an intranet of computerized information-processing systems that takes the place of hierarchy in coordinating interdependence relationships among companies. Such coordination is accomplished mainly by mutual adjustment through e-mail, teleconferencing, and similar electronic linkages.

The temporary nature of the virtual structure is the source of its flexibility, because companies can be added or eliminated as the situation warrants. In the face of this flexibility, the virtual structure's efficiency comes from each company's singular focus on doing what it does best. Thus it would seem that the virtual structure overcomes the efficiency-versus-flexibility trade-offs evident among the other structures just discussed. It does have some drawbacks, however. Considerable efficiency may be sacrificed by virtual structuring, owing to the cost of coordinating efforts spread among several otherwise independent firms. These costs inhibit the use of virtual structures in all but the most turbulent situations.<sup>21</sup>

## Summary

An organization's *structure* is a network of interdependencies among the people and tasks that make up the organization. It is created and sustained by the *basic coordination mechanisms* of *mutual adjustment*, *direct supervision*, and *standardization*, all of which coordinate interdependent relationships among people and groups. Structure emerges as the groups in an organization become clustered together during *functional* or *divisional departmentation*. The resulting departments or divisions are also coordinated by means of *hierarchy* and *centralization*.

Standardization, when used as the primary means of coordination, is the hallmark of *bureaucracy*. Depending on the mix of coordination mechanisms, departmentation, and centralization chosen by the managers of a firm, various types of *prebureaucratic*, *bureaucratic*, or *postbureaucratic* structures may be produced. These include the *simple undifferentiated structure*, the *simple differentiated structure*, the *functional structure*, the *divisional structure*, the *matrix structure*, the *multiunit structure*, the *modular structure*, and the *virtual structure*. Each structural type offers its own strengths and weaknesses, most of which involve trade-offs between efficiency and flexibility.

## Review Questions

1. Given that an organization's structure integrates and differentiates activities in the organization, tell which of the following structural characteristics provide integration and which produce differentiation: basic coordination mechanisms, departmentation, hierarchy, and centralization.
2. Explain why standardization requires stability. Why is mutual adjustment so much more flexible? How does direct supervision fit between the two extremes? Which mechanism(s) would you use to coordinate a television-assembly group of 50 employees? Six custom jewelry makers? A dozen door-to-door magazine salespeople? Why?
3. Explain how professionalization, training, and socialization can be used to create standardization. Based on what you have learned in other chapters, name some additional purposes that these three processes serve in organizations.
4. What kinds of departmentation can be used to cluster groups together? How do departmentation and hierarchy work together to resolve coordination problems among departments or divisions?

# Technology, Environment, and Organization Design

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Organization design—the process of managing organization structure—has important implications for the competitiveness and continued survival of business organizations. Whether they are maintaining existing structures or implementing new ones, managers need to know about the different types of structures as well as the key strengths and weaknesses of each structural type. In addition, they must be able to diagnose and react to the various factors that influence the effectiveness of each type of structure, and they must recognize how a particular structure matches up with their company’s specific business situation.

This chapter presents an adaptive model of organization design that provides guidance to managers engaged in structuring modern organizations. It begins by discussing the concept of organizational effectiveness, which is the ultimate goal of structural management. It then examines some of the most influential contingency factors that govern the effectiveness of alternative structures. In the process, the chapter identifies which of the various structures described in Chapter 12 work best under each of several kinds of business conditions.

### An Adaptive Model of Organization Design

Is there a single *best* type of organizational structure? The fact that many different kinds of structures exist suggests that no one type will be suitable for all organizations. Instead, each form of organization structure possesses unique strengths and weaknesses that make it appropriate for some situations but not for others. Structuring an organization involves making well-considered choices among the various alternatives available.

Organization design is the process of making these choices. In this process, managers diagnose the situation confronting their organization and then select and implement the structure that seems most appropriate. The process of organization design is consciously adaptive and is guided by the principle, illustrated in Figure 13.1, that the degree to which a

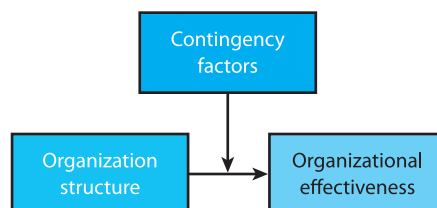


Figure 13.1 The Contingency Model of Organizational Design

particular type of *structure* will contribute to the *effectiveness* of an organization depends on *contingency factors* that impinge on the organization and shape its business.<sup>1</sup>

### Organizational Effectiveness

**Organizational effectiveness**, which is the desired outcome of organization design, is a measure of an organization's success in achieving its goals and objectives. Relevant goals and objectives might include targets pertaining to profitability, growth, market share, product quality, efficiency, stability, or similar outcomes.<sup>2</sup> An organization that fails to accomplish its goals is ineffective because it is not fulfilling its purpose.

An effective organization must also satisfy the demands of the various **constituency groups** that provide it with the resources necessary for its survival. As suggested by Figure 13.2, if a company satisfies customers' demands for desirable goods or services, it will probably continue to enjoy its customers' patronage. If it satisfies its suppliers' demands for payment in a timely manner, the suppliers will probably continue to provide it with needed materials. If it satisfies its employees' demands for fair pay and satisfying work, it will probably be able to retain its workers and recruit new employees. If it satisfies its stockholders' demands for profitability, it will probably enjoy continued access to equity funding.<sup>3</sup> If a firm fails to satisfy any one of these demands, however, its effectiveness will be weakened, because the consequent loss of needed resources, such as customers or employees, will threaten its continued survival.

Effectiveness differs from **organizational productivity** in that productivity measures do not take into account whether a firm is producing the *right* goods or services.<sup>4</sup> A modern

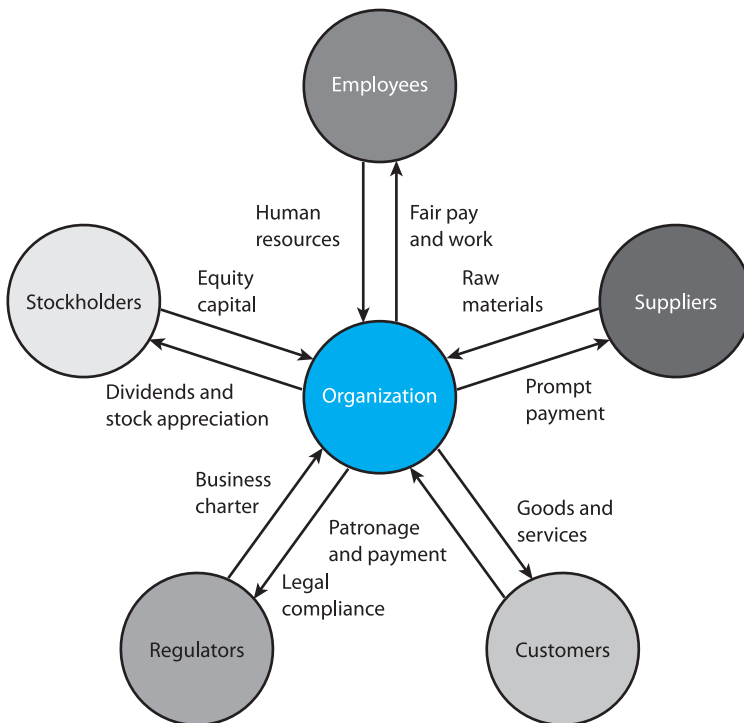


Figure 13.2 Types of Constituency Groups and Their Demands

company producing more glass milk bottles than ever before is certainly productive, but it is also ineffective because most milk companies now sell their products in plastic jugs.

Effectiveness also differs from efficiency. **Organizational efficiency** means minimizing the raw materials and energy consumed by the production of goods and services. This parameter is often stated as the ratio of inputs consumed per units of outputs produced—for instance, the number of labor hours expended in manufacturing a bicycle.<sup>5</sup> Efficiency means *doing the job right*, whereas effectiveness means *doing the right job*. That is, effectiveness is a measure of whether a company is producing what it should produce in light of the goals, objectives, and constituency demands that influence its performance and justify its existence.

### Structural Alternatives

The structure of an organization strongly influences its effectiveness. For each firm, one type of structure—whether simple undifferentiated, simple differentiated, functional, divisional, multiunit, matrix, modular, or virtual—will have the greatest positive effect on its ability to meet its goals and satisfy its constituencies. To clarify the fundamental differences among the various types of structures, we sometimes classify alternatives along a dimension ranging from *mechanistic* to *organic*.<sup>6</sup>

At one extreme on this continuum, purely **mechanistic structures** are machinelike. They permit workers to complete routine, narrowly defined tasks—designed according to the dictates of the efficiency perspective discussed in Chapter 7—in an efficient manner, but they lack flexibility. Extremely mechanistic structures are centralized, having *tall hierarchies* of vertical authority and communication relationships such as the one depicted in the upper panel of Figure 13.3. They are also characterized by large amounts of standardization, as indicated in Table 13.1.

At the other extreme on the same continuum, purely **organic structures** are analogous to living organisms in that they are flexible and able to adapt to changing conditions. In such structures, the motivational and quality perspectives on job design described in Chapter 7 have greater influence on the way tasks are developed and performed, which in turn allows employees more control over their work and affords the organization increased adaptability. Owing to their flexibility, however, organic structures lack the single-minded focus required to perform routine work in the most efficient manner.

The different parts of extremely organic structures are connected by decentralized networks in *flat hierarchies*, like the one shown in the lower panel of Figure 13.3. The emphasis placed on horizontal relationships means that fewer vertical layers are required to process information and manage activities. In addition, organizations with organic structures typically rely more heavily on mutual adjustment and less critically on standardization. Computerized information networks take on greater importance as modes of coordination and communication among interdependent tasks.

Not all organizations represent such extreme cases. In reality, a particular type of structure may be mechanistic in some respects and organic in others. The more mechanistic the structure, the more efficient but less flexible it will be. The more organic the structure, the more flexible but less efficient it will be. These differences in efficiency and flexibility can be traced to the mechanisms used to coordinate work activities. As indicated in Chapter 12, standardization incorporates low long-term coordination costs and thus serves as the basis for mechanistic efficiency. Mutual adjustment, on the other hand, is quite flexible and therefore provides the source of organic flexibility.

Differences in the efficiency and flexibility of mechanistic and organic structures are also attributable to differences in centralization. On the one hand, the greater centralization of



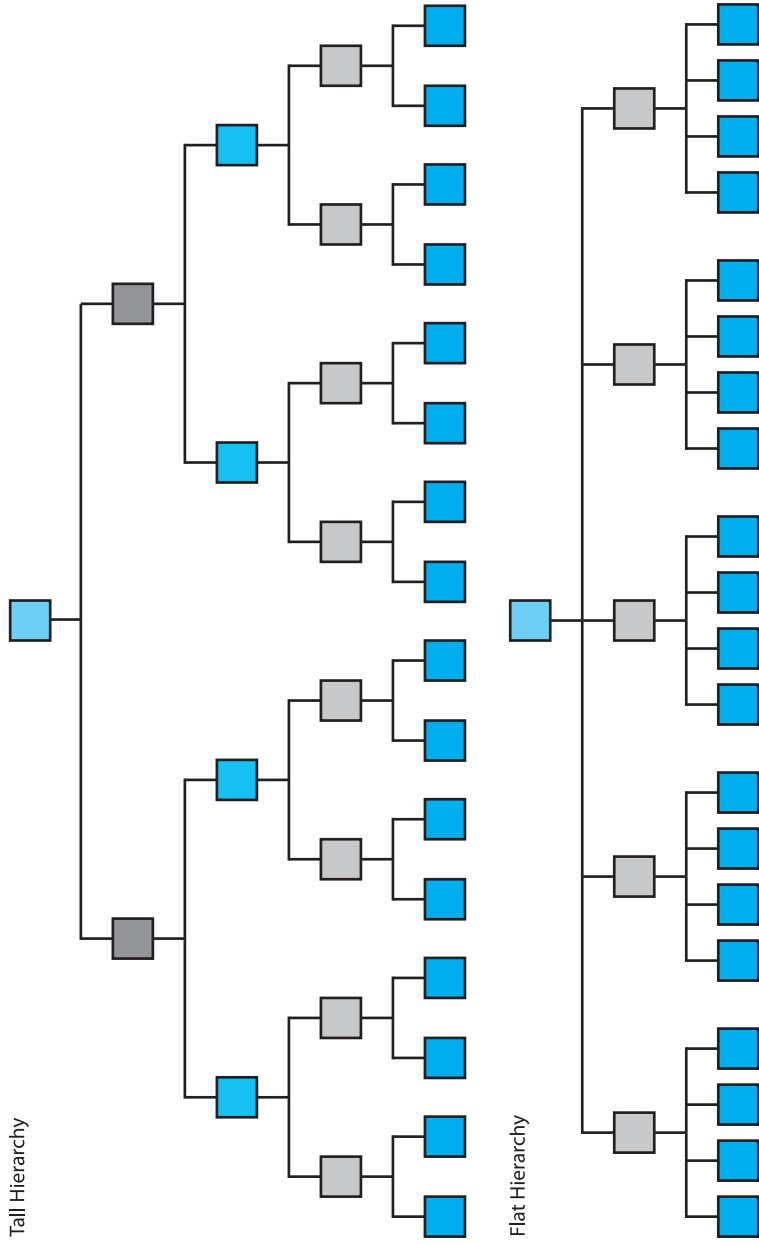


Figure 13.3 Tall and Flat Organizational Hierarchies

**Table 13.1** Comparison of Mechanistic and Organic Structures

<i>Characteristics of mechanistic structures</i>	<i>Characteristics of organic structures</i>
Tasks are highly specialized. It is often not clear to members how their tasks contribute to accomplishment of the organizational objectives.	Tasks are broad and interdependent. Relation of task performance to attainment of organizational objectives is emphasized.
Tasks remain rigidly defined unless they are formally altered by top management.	Tasks are continually modified and redefined by means of mutual adjustment among task holders.
Specific roles (rights, duties, technical methods) are defined for each member.	Generalized roles (acceptance of the responsibility for overall task accomplishment) are defined for each member.
Control and authority relationships are structured in a vertical hierarchy.	Control and authority relationships are structured in a network characterized by both vertical and horizontal connections.
Communication is primarily vertical, between superiors and subordinates.	Communication is both vertical and horizontal, depending on where the needed information resides.
Communication mainly takes the form of instructions and decisions issued by superiors, performance feedback, and requests for decisions sent from subordinates.	Communication takes the form of information and advice.
Loyalty to the organization and obedience to superiors are mandatory.	Commitment to organizational goals is more highly valued than is loyalty or obedience.

Source: Based in part on T. Burns and G. M. Stalker, *The Management of Innovation* (London: Tavistock, 1961), pp. 120–122.

mechanistic structures encourages efficient specialization, with centralized decision makers gaining ever-growing expertise in decision making. On the other hand, the greater decentralization of organic structures facilitates adaptive responsiveness, as decentralized decision makers located throughout an organization can lead its parts in several different adaptive directions at once. IBM's efforts to decentralize company operations illustrate this point quite well. As formerly organized, IBM was so centralized that decisions about the design, manufacture, and sales of personal computers were made by the same headquarters managers who also made decisions about larger mainframe computers and midsize minicomputers. With IBM's current organization, managers of IBM's personal computer lines can decide to introduce new products or enter new markets without consulting with or affecting the operations of other parts of the firm.

### Structural Contingencies

In light of the contrasting strengths and weaknesses of the various types of structures, it is critically important that managers identify key **structural contingency factors** that can help determine whether a particular type of structure will function successfully in their organization.

These factors constitute the situation—both within the organization and in the surrounding environment—that managers must perceive and diagnose correctly to determine how to conduct their business most effectively. The remainder of this chapter considers some of the

most important of these contingency factors and describes how each influences structural choice.

### Life-Cycle Contingencies: Age and Stage of Development

Company age and stage of development are **life-cycle contingencies** associated with organizational growth. As organizations age and mature, they often grow out of one type of structure and into another.<sup>7</sup> This process can be envisioned as a series of developmental stages, as described in Table 13.2.

At the *inception* stage, one person or a small group of people create an organization and identify the firm's initial purpose. As commitment to this purpose develops, initial planning and implementation bring the firm to life. If the organization proves initially successful, it may experience rapid growth. As routines emerge, workers may invent general rules to preserve customary ways of doing things. Little, if any, formal coordination occurs, however. Mutual adjustment or direct supervision usually suffices as the primary means of unit coordination. Consequently, the organization takes on one of the prebureaucratic forms of structure—either simple undifferentiated or simple differentiated—with the choice depending on the effects of other contingency considerations discussed later in this chapter.

During the second developmental stage, *formalization*, work becomes divided into different functional areas, the organization develops systematic evaluation and reward procedures, and its direction is determined through formal planning and goal setting. As the organization continues to grow, professional managers first supplement and then replace the firm's owners, becoming the day-to-day bosses who run the company. In addition, decision making becomes increasingly centralized. Management emphasizes efficiency and stability, and work becomes routine as tasks are designed in accordance with the efficiency perspective on job design. In the process, standardization emerges as the means by which coordination is achieved. As a consequence, the organization's structure becomes bureaucratic, and typically functional.

**Table 13.2** Stages in Organizational Maturation

Stage	Primary characteristics	Structural type
Inception	Determination of firm's purpose Growth of commitment Initial planning and implementation Reliance on mutual adjustment	Prebureaucratic
Formalization	Rapid growth and change Development of routine activities Division of work into functions Systematic evaluation and rewards Formal planning and goal setting Emphasis on efficiency and stability	Bureaucratic (functional)
Elaboration	Search for new opportunities Diversification, decentralization Maturation and continued growth	Bureaucratic (divisional)
Transformation	Large size, either real or virtual Flattened organization hierarchy Massive change and complexity Emphasis on flexibility	Postbureaucratic

To adapt to changing conditions and to pursue continued growth, a firm that has progressed to the third stage, *elaboration*, seeks out new product, location, or client opportunities. As the company's business diversifies, its centralized management loses the ability to coordinate work activities, and a need develops for decentralization and divisional departmentation. If the firm continues to mature even further, continued growth and diversification might require yet more structural elaboration. Although the company's structure remains bureaucratic, management must consider reliance on mutual adjustment, no matter how costly, to cope with the firm's greater complexity or need for greater flexibility. The motivation and quality perspectives influence job design at this point, as standardization fades in importance and employees gain greater control over their work. Whether the specific type of structure possessed by the firm will be divisional, matrix, or multiunit depends on the effects of other contingency factors.

Finally, an organization that has advanced to the fourth developmental stage, known as *transformation*, finds itself confronted by extremes of both change and complexity in its business situation. To compete, the company enters into the process of *mass customization*, wherein it relies on skilled teams and advanced technologies to tailor mass-produced goods or services to the unique demands of different clientele.<sup>8</sup> The quality perspective on job design is fully apparent at this stage of development. Autonomous teams use both mutual adjustment and decentralization to manage themselves and to coordinate with one another by sharing information on computerized networks. The pyramidal hierarchy developed during the stages of formalization and elaboration becomes transformed into a flattened, horizontal structure characterized by process flows and peer relationships. These flows and relationships may be wholly contained within the organization itself, or they may extend outward and into other firms. The organization adopts a postbureaucratic structure, either modular or virtual, depending on the influence of additional contingency effects discussed later.

The four-stage developmental model just described suggests that, as older organizations grow more complex, their structures and the jobs within them similarly become more complicated. Note, however, that not every organization progresses through every developmental stage. For instance, a family-owned convenience store may never grow beyond the stage of inception. Such notable companies as Apple Computer and Coca-Cola have yet to grow beyond elaboration. In addition, some companies leap over one or more stages as they develop—for example, starting out with formalization or elaboration, or moving directly from initiation to transformation. Not every company starts small, nor do all firms invest in bureaucracy. Nonetheless, the fact remains that increasing age is accompanied by a tendency to progress from prebureaucratic structures developed during the stage of inception, to bureaucratic structures developed during formalization and elaboration, and then to post-bureaucratic structures developed during transformation. As an organization advances through this sequence of stages and structures, its management faces a progression of new contingency factors at each stage. This progression is the focus of the remainder of this chapter.

## Inception Contingencies

Organizations at the developmental stage of inception are typically new, small, and fairly simple in form. Consequently, they are most likely to have prebureaucratic structures. It follows that the organization design choice confronting managers concerns which prebureaucratic structure to adopt—simple undifferentiated or simple differentiated. Both alternatives are relatively organic, despite the ownership-related direct supervision found in simple differentiated structures. Because they share this general similarity, considerations regarding trade-offs

between mechanistic efficiency and organic flexibility have little relevance. Instead, the choice between the two prebureaucratic structures is influenced by the contingency factor of organization size.

**Organization size** can be defined in several ways:

- the number of members in an organization
- the organization's volume of sales, clients, or profits
- its physical capacity (for example, a hospital's number of beds or a hotel's number of rooms)
- the total financial assets it controls<sup>9</sup>

For our purposes, size is considered to be the number of members or employees within the organization—that is, the number of people whose activities must be integrated and coordinated.

Defined in this manner, the size of an organization affects its structure mainly by determining which of the three coordination mechanisms—mutual adjustment, direct supervision, or standardization—is most appropriate as the primary means of coordination. As indicated in Chapter 12, in extremely small organizations containing 12 or fewer people, mutual adjustment alone can provide adequate coordination without incurring overwhelming process loss. If more than about a dozen people try to coordinate by means of mutual adjustment alone, however, so much process loss occurs that performance declines substantially. Thus the activities of larger numbers of people (30, 40, or 50) are better coordinated by direct supervision, because such supervision reduces the number of coordination linkages that must be maintained. In even larger organizations, direct supervision succumbs to information overload. Standardization must therefore be implemented instead to reduce information-processing demands and sustain coordinated efforts.

This relationship between organization size and coordination mechanism has especially strong contingency effects on choices between the two prebureaucratic structural alternatives. Simple undifferentiated structures, coordinated solely by means of mutual adjustment, can be used to effectively integrate the people and tasks that make up very small organizations. Simple differentiated structures, with their reliance on direct supervision, become the necessary choice for organizations that grow in size beyond a dozen or so individuals. For managers of small organizations who must choose among alternative prebureaucratic structures, organization size influences structural choice and effectiveness through its effects on coordination.

## Formalization and Elaboration Contingencies

As an organization grows beyond 50 people or so, simple undifferentiated structures and simple differentiated structures become overwhelmed by coordination requirements. As the primary means of coordination, mutual adjustment becomes extremely expensive, and direct supervision is bogged down by rapidly multiplying information-processing needs. As a consequence, standardization assumes the role of primary coordination mechanism. For this reason, organizations that have progressed beyond the stage of inception and outgrown prebureaucratic structures must consider the adoption of more bureaucratic forms of structure.

Relative to prebureaucratic structures, bureaucratic structures are more mechanistic and, therefore, more standardized and often more centralized. However, the four types of bureaucratic structures also differ from one another along these same dimensions. Functional struc-

tures are the most mechanistic, owing to their standardization and high level of centralization. Divisional structures are substantially less mechanistic, owing to their reduced centralization, but still quite mechanistic relative to the remaining structural alternatives. Matrix structures are even less mechanistic, and therefore more organic, owing to their greater decentralization and reliance on mutual adjustment among the managers of matrix cells. Finally, multiunit structures are the least mechanistic of the four bureaucratic structures, reflecting the extreme decoupling that occurs among their parts and the high levels of decentralization that result.

Consequently, for managers trying to decide which bureaucratic structure to implement, the trade-off between mechanistic efficiency and organic flexibility plays a major role in shaping structural choices. Related to this trade-off, the most influential contingency factors at the formalization and elaboration stages of development consist of the organization's core technology and the environment that surrounds the firm.<sup>10</sup>

### Core Technology

An organization's **technology** includes the knowledge, procedures, and equipment used to transform unprocessed resources into finished goods or services.<sup>11</sup> **Core technology** is a more specific term that encompasses the dominant technology used in performing work in the operational center of the organization. Core technologies are found in the assembly lines at GM, Ford, and Chrysler, in the fast-food kitchens at Burger King and Wendy's, in the employment and job-training offices in state and federal agencies, and in the reactor buildings where electricity is generated at nuclear power plants. This section introduces two contingency models that delineate basic differences in core technology: the Woodward manufacturing model and the Thompson service model. Both propose that core technology influences the effectiveness of an organization by placing particular coordination requirements on its structure.

#### Woodward's Manufacturing Technologies

Joan Woodward, a British researcher who began studying organizations in the early 1950s, was an early proponent of the view that an organization's technology can have tremendous effects on its structural effectiveness.<sup>12</sup> She initially studied 100 British manufacturing firms, examining their organizational structures and their relative efficiency and success in the marketplace. While analyzing her data, Woodward discovered that not all companies with the same type of structure were equally effective. Theorizing that these differences in effectiveness might be traced to differences in core technologies, Woodward devised a classification scheme to describe the three basic types of manufacturing technology: small-batch production, mass production, and continuous-process production.

*Small-batch production* (also called *unit production*) is a technology for the manufacture of one-of-a-kind items or small quantities of goods designed to meet unique customer specifications. Such items range from specialized electronic instruments, weather satellites, and space shuttles to hand-tailored clothing. To make this kind of product, craftspeople work alone or in small, close-knit groups. Because customer specifications change from one order to the next, the organization finds it almost impossible to predict what will be required on the next job. Thus the work in firms using small-batch technologies varies in unpredictable ways.

This unpredictability causes small-batch technologies to influence organizational structures and effectiveness. It impedes planning and therefore makes it difficult to coordinate by means of standardization. Not surprisingly, it is impossible to plan legitimate standards for use in a future that cannot be foreseen. Instead, employees must decide for themselves how to

perform their jobs. When employees work alone, they are guided by their own expertise and by customer specifications. When employees work in groups, they coordinate with one another by means of mutual adjustment.

Woodward found that mutual adjustment played a pivotal role in coordinating small-batch production. In her research, she showed that, among organizations using this type of technology, firms with organic structures were significantly more likely to be successful than companies with mechanistic structures. Of the four types of bureaucratic structures likely to be adopted during the developmental stages of formalization and elaboration, according to Woodward's findings, multiunit structuring would appear more likely to provide the greatest autonomy and support for technological flexibility. The matrix structure, itself a massive lateral linkage mechanism, is another suitable alternative.

The other lateral linkage mechanisms described in Chapter 11—liaison positions, representative groups, and integrating managers—can also be positioned in functional and divisional structures to increase mutual adjustment and introduce greater flexibility. In this way, otherwise mechanistic structures can be made at least modestly organic. Thus it follows that functional or divisional structures with extensive lateral linkages can prove effective when paired with small-batch technology. As with all other technology-based decisions, which one of this reduced set of structural alternatives is best suited to the needs of a particular organization becomes clearer after consideration of the environmental contingencies discussed later in this section.

In Woodward's second type of technology, *mass production* (also referred to as *large-batch production*), the same product is produced repeatedly, either in large batches or in long production runs. For instance, rather than producing a few copies of this book each time an order was received, the publisher initially printed thousands of copies in a single run and warehoused them to fill incoming orders. Other examples of mass production range from word-processing pools in which business records are transcribed in large batches to manufacturing operations in which thousands of Ford Explorers are made on an assembly line that remains virtually unchanged for several years.

As these examples suggest, work in mass-production technologies is intentionally repetitive and remains so for extended periods of time. Employees perform the same jobs over and over, knowing that the work they do tomorrow will be the same as the work done today. The existence of this stability and routine facilitates planning and formalization. As a result, a company is likely to use standardization to reduce the long-term costs of coordination. Woodward's research revealed that mass-production firms with mechanistic structures were far more likely to be effective than those with organic structures. Therefore, mechanistic structures—functional or divisional—are more apt to enhance effectiveness than are more organic alternatives.

In the third type of technology identified in Woodward's research, *continuous-process production*, automated equipment makes the same product in the same way for an indefinite period of time. For instance, at Marathon Petroleum, one refinery unit makes nothing but gasoline, another unit refines motor oil, and a third unit produces only diesel fuel. The equipment used in this type of technology is designed to produce one product and cannot readily be switched over to manufacture a different product. There is no starting and stopping once the equipment has been installed. Machines in continuous-process facilities perform the same tasks without interruption.

Of the three types of technology described by Woodward, continuous-process production involves the most routine work. Few changes, if any, occur in production processes, even over the course of many years. For this reason, it seems logical to assume that organizations using continuous-process production would be most effective if structured along mechanistic lines.

Interestingly, however, closer examination reveals that few of the people involved in continuous-process production perform routine, repetitive jobs. Rather, machines perform these jobs. The people act as “exception managers,” monitoring production equipment by watching dials and gauges, checking machinery, inspecting finished goods, and handling the problems that arise when this equipment fails to function properly. Although some of these problems occur repeatedly and can be planned for in advance, a significant number are emergencies that have never happened before and cannot be anticipated with acceptable accuracy.

Because some of the most critical work performed by people in continuous-process production technologies is highly unpredictable, standardization is not feasible. Mutual adjustment, sometimes in conjunction with direct supervision, is therefore the dominant mode of coordination. Technicians who oversee production equipment manage unusual events by conferring with each other and devising solutions to emergencies as they arise. It is not surprising that Woodward found that firms using continuous-process production technologies were most effective when structured organically. In these circumstances, laterally linked functional or divisional structures, or matrix or multiunit structures, are the most likely to encourage effectiveness.

In the years since Woodward conducted her studies, advances in computers, robotics, and automation have led to the creation of another type of manufacturing technology, known as *flexible-cell production*. As described in Chapter 7, this type of technology is characterized by computer-controlled production machines in a group, or cell, which are connected by a flexible network of conveyors that can be rapidly reconfigured to adapt the cell for different production tasks. This technology is typically used to produce a wide variety of machined metal parts, such as pistons for car engines or parts for the lock on the front door of your home. Conceivably, however, it could be used to manufacture virtually any kind of product.

As in continuous-process production, automated equipment performs the work in flexible cells. The only people involved are technicians who monitor the equipment and handle problems. Whereas continuous-process production facilities can make only a single product, however, flexible cells can make many different things. In this respect, flexible-cell production resembles small-batch production. It is an efficient method of producing one-of-a-kind items or small quantities of similar items built to satisfy unique customer specifications.

Inasmuch as Woodward found mutual adjustment to be the most effective coordination mechanism for both continuous-process and small-batch production technologies, an organic structure would seem most suitable for a firm using flexible-cell production. Indeed, a study of 110 manufacturing firms in New Jersey revealed a significant positive relationship between organic structuring and the effectiveness of organizations with flexible cells.<sup>13</sup> This information updates Woodward’s research, suggesting that companies employing flexible-cell technologies are likely to be more effective if they adopt laterally linked functional or divisional structures, or matrix or multiunit structures, to coordinate work activities.

### *Thompson’s Service Technologies*

Because Woodward focused her research solely on manufacturing firms, her contingency model is applicable only to technologies used to produce tangible goods. Today, however, firms that provide services such as real estate sales, appliance repair, or investment planning make up an increasingly critical element of the U.S. economy as well as the economies of other countries. Another contingency model, developed by James D. Thompson, is quite useful because it examines the technologies often employed in these service organizations. These technologies, which are diagrammed in Figure 13.4, include mediating technology,



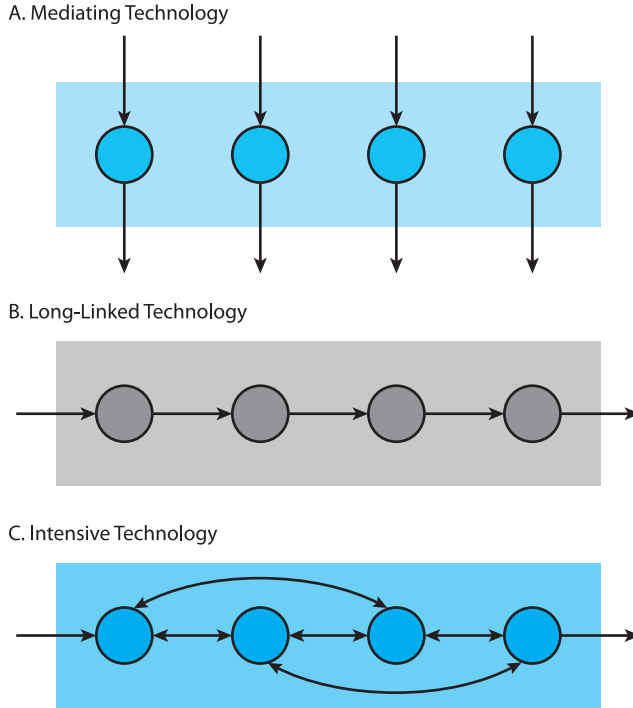


Figure 13.4 Thompson's Service Technologies

long-linked technology, and intensive technology.<sup>14</sup> In the figure, circles represent employees, and arrows represent flows of work.

A *mediating technology* provides services that link clients together. For example, banks connect depositors who have money to invest with borrowers who need loans; insurance companies enable their clients to pool risks, permitting one person's losses to be covered by joint investments; and telephone companies provide the equipment and technical assistance that people need to talk with one another from separate locations.

When mediating technology is used to provide a service, employees usually serve each client individually. Consequently, as depicted in Figure 13.4A, bank tellers and workers in other mediating technologies normally perform their jobs without assistance from others in their organization. Assuming adequate training, a single bank teller can handle a deposit or withdrawal without seeking help from other tellers. At the same time, however, the teller and other workers may share equipment such as the central computer that keeps track of all bank transactions.

Although individual employees work independently in a mediating technology, many perform the same job. Coordination in such firms is needed to ensure that workers provide consistently high-quality service and offer the same basic service to each client. Thus managers in service firms develop lists of the different types of clients that their organization is likely to serve and devise standard operating procedures to be followed while serving each type of client. For example, a bank teller will follow one procedure while serving a client who is making a savings account deposit, a second procedure when assisting a client who is making a loan payment, and a third procedure when helping a client open a new checking account. This standardization of behaviors means that firms using mediating technologies are most

likely to be effective when structured mechanistically. Either functional or divisional structures would be suitable for such firms.

Thompson's second type of technology, *long-linked technology*, is analogous to Woodward's mass-production technology. Both refer to sequential chains of simplified tasks. A service sector example of this type of technology is the state employment agency that requires all clients to follow the same lockstep procedures. Each client moves along an "assembly line," starting with registration and progressing through assessment, counseling, training, and placement activities. Figure 13.4B diagrams the sequential movement from one station to the next that characterizes long-linked technology.

Like firms that use mass-production technology, organizations that use long-linked technology coordinate by means of standardization. According to Thompson, mechanistic structuring is likely to enhance the effectiveness of a firm using long-linked technology. This finding suggests that long-linked technology is most effectively paired with functional or divisional structures.

*Intensive technology*, the third type of technology in Thompson's model, consists of work processes whose configuration may change as employees receive feedback from their clients. The specific array of services to be rendered to a particular patient in a hospital, for example, depends on the patient's symptoms. A patient who enters the hospital's emergency room complaining of chest pains may be rushed to an operating room and then to a cardiac-care unit. A patient with a broken arm may be shuttled from the emergency room to the radiology lab for an X-ray and then returned to the emergency room for splinting. A patient with less clear-cut symptoms may be checked into a hospital room for further observation and testing (see Figure 13.4C).

To accommodate the needs of each client, a firm using intensive technology must be able to reorganize itself again and again. Above all, it must have flexibility. Moreover, because the needs of future clients cannot be forecast accurately, the behaviors required of the workers in such a firm are too unpredictable to be successfully formalized. Both flexibility and unpredictability require the use of mutual adjustment as a coordinating mechanism. Thus, firms using intensive technology will be best served by laterally linked functional or divisional structures, or matrix or multiunit structures.

### *Technological Contingencies: Integration*

Both the Woodward and Thompson technology models help identify which general form of organization structure is most likely to enhance the effectiveness of a firm whose primary operations incorporate a specific type of core technology. As indicated in Table 13.3, standardization and mechanistic structuring generally enhance the effectiveness of firms using core technologies that are suited to more routine work—mass-production, mediating, and long-linked technologies. Mutual adjustment and organic structuring, in contrast, promote effectiveness in firms that use core technologies suited to unpredictable, often rapidly changing requirements—small-batch, continuous-process, flexible-cell, and intensive technologies.<sup>15</sup>

### **The External Environment**

An organization's **environment** encompasses everything outside the organization. Suppliers, customers, and competitors are part of an organization's environment, as are the governmental bodies that regulate its business, the financial institutions and investors that provide it with funding, and the labor market that contributes its employees. In addition, general factors

Table 13.3 Technological Contingencies

Industry type	Technology	Structural category	Structural types	Example
Manufacturing	Small batch	Organic	Laterally linked functional or divisional, matrix	Scientific instrument fabricator
	Mass	Mechanistic	Functional, divisional	Television manufacturer
	Continuous process	Organic	Laterally linked functional or divisional, matrix	Petroleum refinery
	Flexible cell	Organic	Laterally linked functional or divisional, matrix	Auto parts supplier
Service	Mediating	Mechanistic	Functional, divisional	Bank
	Long-linked	Mechanistic	Functional, divisional	Cafeteria
	Intensive	Organic	Laterally linked functional or divisional, matrix	Hospital

such as the economic, geographic, and political conditions that impinge on the firm are part of its environment. Central to this definition is the idea that the term *environment* refers to things external to the firm.<sup>16</sup> The internal “environment” of a firm, more appropriately called the company’s culture, is distinctly different and will be discussed in Chapter 14.

As a structural contingency factor affecting organizations in the stages of formalization and elaboration, the environment influences structural effectiveness by placing certain coordination and information-processing restrictions on the firm. Five specific environmental characteristics influence structural effectiveness: change, complexity, uncertainty, receptivity, and diversity.

**Environmental change** concerns the extent to which conditions in an organization’s environment change unpredictably. At one extreme, an environment is considered stable if it does not change at all or if it changes only in a cyclical, predictable way. An example of a stable environment is the one that surrounds many of the small firms in Amish communities throughout the Midwestern United States. Amish religious beliefs require the rejection of many modern conveniences, such as automobiles, televisions, and gasoline-powered farm equipment. As a consequence, Amish blacksmiths, farmers, and livestock breeders have conducted business in much the same way for generations. Another stable environment surrounds firms that sell Christmas trees. The retail market for cut evergreen trees is predictably strong in November and December but weak at other times of the year.

At the other extreme, an environment is considered dynamic when it changes over time in an unpredictable manner. Because the type of dress deemed stylish changes so frequently in many parts of the world, the environment surrounding companies in the fashion industry is quite dynamic. Similarly, the environment surrounding companies in the consumer-electronics industry has changed dramatically in recent years. Breakthrough products such as high-definition televisions and digital cameras have created entirely new industries and markets.

Environmental change affects the structure of an organization by influencing the predictability of the firm's work and, therefore, the method of coordination used to integrate work activities.<sup>17</sup> Stability allows managers to complete the planning needed to formalize organizational activities. Firms operating in stable environments can use standardization as their primary coordination mechanism and will typically elect to do so to reduce long-term coordination costs. Mechanistic structures—functional or divisional—are the most likely to prove effective in such instances.

In contrast, it is difficult to establish formal rules and procedures in dynamic environments. In fact, it is useless for managers to try to plan for a future they cannot foresee. Members of an organization facing a dynamic environment must adapt to changing conditions instead of relying on inflexible, standardized operating procedures. Dynamism in the environment leaves management with little choice but to rely on mutual adjustment as a primary coordination mechanism. The organic structuring of laterally linked functional or divisional structures, or matrix or multiunit structures, is therefore appropriate.

**Environmental complexity** is the degree to which an organization's environment is complicated and therefore difficult to understand. A simple environment is composed of relatively few component parts—for example, suppliers, competitors, or types of customers—so little can affect organizational performance. A locally owned gas station does business in a relatively simple environment. It orders most of its supplies from a single petroleum distributor, does business almost exclusively with customers who want to buy gasoline or oil for their cars, and can limit its attention to the competitive activities of a fairly small number of nearby stations. On the other hand, a complex environment incorporates a large number of separable parts. The environments of aviation firms like Boeing and Airbus Industries are extremely complex, including an enormous number of suppliers and many types of customers.

Complexity influences structural effectiveness by affecting the amount of knowledge and information that people must process to understand the environment and cope with its demands.<sup>18</sup> To demonstrate this effect, consider an inexpensive digital watch. If you disassembled this watch, you would probably have little trouble putting it back together again, because it has very few parts—a computer chip programmed to keep time, a digital liquid-crystal face, a battery, and a case. With only a few minutes of practice or simple instructions, you could quickly learn to assemble this watch. Now suppose the pieces of a Rolex watch were spread out before you. Could you reassemble the watch? Probably not, because it includes an overwhelming number of springs, screws, gears, and other parts. Learning to assemble a Rolex properly would require extensive training and much practice.

Similarly, the organization facing a simple environment—one with few “parts”—can understand environmental events and meet the challenges they pose by using a minimal amount of knowledge and processing little new information. A local restaurant that is losing business can determine the reason for its plight simply by telephoning a few prospective customers and asking them for their comments. In contrast, organizations in complex environments—environments with many “parts”—must draw on a considerable store of knowledge and process an overwhelming amount of information to understand environmental events. For example, to find the reason for its loss of market share, Chrysler Corporation analyzed competitors' marketing strategies and performed extensive market studies of consumer preferences. To recapture market share, the company also worked with hundreds of suppliers to increase the quality and reduce the cost of the parts used to produce its cars.<sup>19</sup>

Environmental complexity affects organizational structures by influencing the suitability of centralized decision making. As indicated in Chapter 12, centralization is characterized by decision making that is limited to a selected group of top managers. It therefore limits the

number of people available to digest information and determine its meaning. Because simple environments require little information processing, organizations operating in such environments can be centralized and function quite effectively.

Because environmental complexity requires the ability to process and understand large amounts of information, however, centralized organizations in complex environments can suffer the effects of information overload. One possible way to cope with this information overload is to invest in computerized management information systems. The usual net effect of such investment is actually to *increase* the amount of environmental information available, thereby contributing to *additional* information overload. A more successful way to handle the problem of information overload due to environmental complexity is to involve more individuals in information-processing activities. Thus organizations that are attempting to cope with complex environments often decentralize decision making. That way, they include more people—more brains—in the process of digesting and interpreting information.

In addition to pointing out distinctive environmental differences, the two environmental dimensions of change and complexity combine in the manner shown in Figure 13.5 to define yet another important environmental characteristic: **environmental uncertainty**. Uncertainty reflects a lack of information about environmental factors, activities, and events.<sup>20</sup> It undermines an organization’s ability to manage current circumstances and plan for the future. To cope with uncertainty, organizations try to find better ways of acquiring information about the environment. This effort often involves the creation of boundary-spanning positions that can strengthen the information linkage between an organization and its environment.<sup>21</sup>

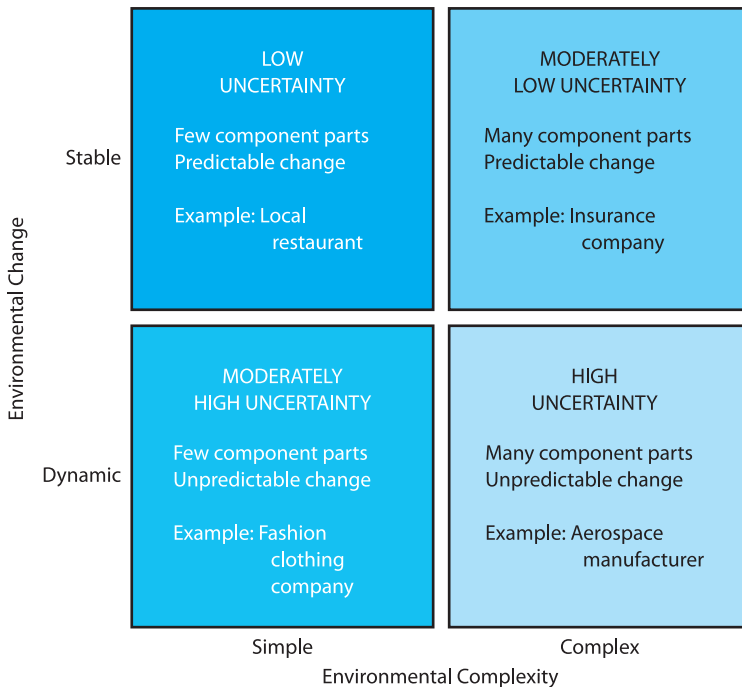


Figure 13.5 Environmental Uncertainty as a Function of Change and Complexity

Source: Based on R. B. Duncan, “Characteristics of Organizational Environments and Perceived Environmental Uncertainty,” *Administrative Science Quarterly* 17 (1972), 313–327.

A *boundary spanner* is a member or unit of an organization that interacts with people or firms in the organization's environment.<sup>22</sup> Salespeople who have contact with customers, purchasing departments that deal with suppliers of raw materials, and top managers who in their figurehead roles represent the company to outsiders are all boundary spanners. When they take on boundary-spanning roles, employees or organizational units perform several functions:

- They monitor the environment for information that is relevant to the organization.
- They serve as gatekeepers, simplifying incoming information and ensuring that it is routed to the appropriate people in the firm.
- They warn the organization of environmental threats and initiate activities that protect it from those dangers.
- They represent the organization to other individuals or firms in its environment, providing them with information about the organization.
- They negotiate with other organizations to acquire raw materials and sell finished goods or services.
- They coordinate any other activities that require the cooperation of two or more firms.<sup>23</sup>

When carried out successfully, these activities enable boundary spanners to provide their organization with information about its environment that can help make change and complexity more understandable.

**Environmental receptivity**, which ranges from munificent to hostile, is the degree to which an organization's environment supports the organization's progress toward fulfilling its purpose. In a munificent environment, a firm can acquire the raw materials, employees, technology, and capital resources needed to perform productively.<sup>24</sup> Such an environment enables the firm to find a receptive market for its products. The firm's competitors, if any, do not threaten its existence. Regulatory bodies do not try to impede its progress. For example, the environment surrounding the McDonald's fast-food chain at the time of its founding was munificent. Few other fast-food franchises existed, labor was plentiful in the post-Korean War era, and a convenience-minded middle class was emerging throughout North America.

In a hostile environment, the opposite situation prevails. An organization may have great difficulty acquiring, or may be unable to acquire, needed resources, employees, knowledge, or money. Customer disinterest, intense competition, or severe regulation may also threaten the firm's future. For instance, R. J. Reynolds and other members of the tobacco industry have been forced to cope with extreme hostility in North America owing to widespread concerns about the health hazards of smoking. During the 1990s, U.S. defense contractors faced similar hostility as the Cold War ended and the demand for defense weaponry diminished.<sup>25</sup>

Environmental hostility, though normally temporary, represents a crisis that must be handled quickly and decisively if the firm is to survive. An organization facing such hostility either finds a way to deal with it—for example, by substituting one raw material for another, marketing a new product, or lobbying against threatening regulations—or ceases to exist. For example, tobacco companies have contributed to the campaign funds of politicians known to be against the passage of antismoking laws, and defense contractors have merged with other companies to convert to peacetime manufacturing.

To deal with the crisis of a hostile environment, firms that are normally decentralized in response to environmental complexity may centralize decision making for a limited period of time.<sup>26</sup> This temporary centralization facilitates crisis management. Because it reduces the

number of people who must be consulted to make a decision, the organization can respond to threatening conditions more quickly. It is important to emphasize that centralization established in response to a hostile environment should remain in effect only as long as the hostility persists. When the threat ends, a firm dealing with a complex environment will perform effectively again only if it reinstates decentralized decision making.

**Environmental diversity** refers to the number of distinct environmental sectors or domains served by an organization. A firm in a uniform environment serves a single type of customer, provides a single kind of product, and conducts its business in a single geographic location. That is, it serves only a single domain. A campus nightclub that caters to the entertainment needs of local college students, for example, operates in a uniform environment. So does a building-materials firm whose sole product is concrete, which it sells only to local contractors. In contrast, an organization in a diverse environment produces an assortment of products, serves various types of customers, or has offices or other facilities in several geographic locations. It does business in several different domains. Dell, for instance, sells computers to businesses, universities, and the general public. General Electric produces durable consumer goods, financial services, jet engines, and locomotives. Volkswagen markets cars in North America, South America, Europe, and Asia.

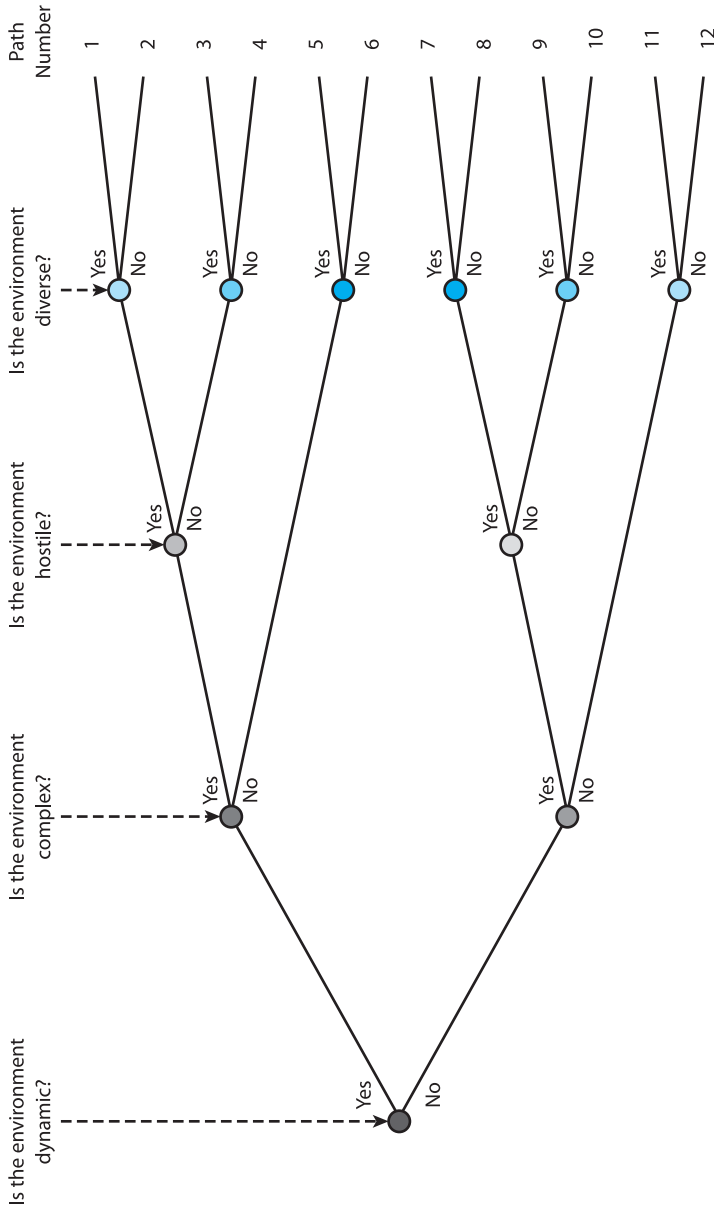
Environmental diversity affects an organization by influencing the amount of diversity that must be built into its structure.<sup>27</sup> In organizations with uniform environments, managers can use functional departmentation to group units together. Because firms in uniform environments face only a single domain, they must focus on only information about a single kind of environment and react to only a single set of environmental events. Functional departmentation, which facilitates this sort of unified information processing and response, is therefore sufficient in such situations. The absence of environmental diversity permits the firms to operate effectively without significant internal diversification.

In organizations with diverse environments, however, management must use divisional departmentation to gather work associated with each product, customer, or location into its own self-contained division. Companies in diverse environments face a number of distinct domains and must acquire information about each to satisfy its particular demands. Divisional departmentation allows such firms to keep track of each domain separately and to respond to the demands of one domain independently of other domains. Without this type of structure, work on one product might impede work on other products, services rendered to one type of customer might detract from services provided to other types of customers, or operations at one location might affect operations at other locations.

Environmental uniformity, then, favors functional departmentation and suggests the need for a functional structure. In contrast, environmental diversity requires divisional departmentation and either a divisional, matrix, or multiunit structure, depending on other contingency factors.

### *Environmental Contingencies: Integration*

As just indicated, organizational environments have five distinct characteristics: change, complexity, uncertainty, receptivity, and diversity. Diagnosing the nature of a firm's environment during the process of organization design requires that managers perform five environmental analyses more or less simultaneously. The decision tree shown in Figure 13.6 can help guide this process. Each question in the figure deals with one of the environmental characteristics just examined. Note that it is not necessary to ask a separate question about uncertainty, because this property is a combination of change and complexity and therefore is assessed implicitly by the answers to questions 1 and 2.



Path Number	Structural Alternatives	Path Number	Structural Alternatives
1	Divisional with lateral linkages, or matrix or multiunit; temporary centralization; extensive boundary spanning	5	Divisional with lateral linkages
2	Functional with lateral linkages, or matrix or multiunit; temporary centralization; extensive boundary spanning	6	Functional with lateral linkages
3	Divisional with lateral linkages, or matrix or multiunit; extensive boundary spanning	7	Divisional; temporary centralization
4	Functional with lateral linkages, or matrix or multiunit; extensive boundary spanning	8	Functional
		9	Divisional
		10	Functional
		11	Simple or divisional, depending on size
		12	Simple or functional, depending on size

Figure 13.6 Decision Tree: Environmental Contingency Dimensions



1. *Is the environment stable or dynamic?* The answer to this question identifies the amount of change in the environment and helps determine whether standardization or mutual adjustment is likely to be more effective as a coordination mechanism for the firm. Stable environments either do not change or change in a predictable, cyclical manner, thereby permitting the use of standardization. Dynamic environments change in unpredictable ways and require mutual adjustment.
2. *Is the environment simple or complex?* This answer relies on an assessment of environmental complexity and will indicate whether centralization or decentralization is more appropriate for the firm. Simple environments are more readily understood and accommodate centralization. Complex environments require a great deal of information processing and therefore exert pressure toward decentralization.
3. *Is the environment munificent or hostile?* This question is relevant only if an organization has a complex environment and decentralized decision making. How it is answered gauges environmental receptivity and indicates whether temporary centralization is necessary. Munificent environments are resource-rich and allow for continued decentralization, whereas hostile environments are resource-poor and stimulate crises that mandate temporary centralization.
4. *Is the environment uniform or diverse?* To respond to this question, a manager must evaluate environmental diversity so as to determine which form of departmentation to use. Environmental uniformity supports the structural uniformity of functional departmentation. Environmental diversity requires the structural diversity of divisional departmentation.

## Transformation Contingencies

Transition beyond bureaucratic structuring occurs because the standardization intended to stimulate efficient performance can, in some instances, actually reduce efficiency and productivity. This reduction can happen for several reasons. For instance, the very existence of bureaucratic rules and procedures can encourage the practice of following them to the letter. Some employees may interpret rules that were intended to describe minimally acceptable levels of performance as describing the maximum level of performance for which they should aim. As a result, their performance may suffer.

In addition, rigid adherence to rules and regulations can discourage workers from taking the initiative and being creative, and the organization can subsequently lose its ability to anticipate or adapt to changing conditions. During the late 20th century, rules that required lengthy approval reviews for even minor design changes limited the ability of many U.S. firms then in the consumer-electronics industry to improve existing products or introduce new ones. As a result, once-dominant U.S. companies such as General Electric and Sunbeam are no longer major participants in markets for everything from hair-curling irons to stereo receivers. Forgone flexibility can cost organizations precious markets—and sometimes even their survival.

Standardization can also undermine efficiency by narrowing the scope of workplace activities to the point where employees feel bored and unchallenged. Oversimplification caused by too much standardization can contribute to serious problems of workforce motivation and, as a consequence, poor performance.<sup>28</sup> Groups of workers may develop informal social structures in which low productivity is the norm. Employees may even turn to dangerous horseplay or costly sabotage to break up the monotony or to “get even” with a company they perceive as insensitive and uncaring. Sometimes the job redesign and

enrichment procedures described in Chapter 7 can provide sufficient relief in such circumstances. In other cases, nothing short of organizational restructuring will succeed in countering the effects of overspecialization.

In sum, the standardization that characterizes all bureaucratic structures can have important drawbacks. To the degree that these drawbacks impede efficiency, bureaucracy fails to achieve its intended purpose and can threaten the organization's success and continued well-being. Firms facing this danger have grown beyond the developmental stages of formalization and elaboration, and now find themselves entering into the stage of transformation.

Managers of organizations in the stage of transformation confront the challenge of dealing with business conditions that require the resources of a large organization but the flexibility of a small one. Global competition, technological volatility, and trends toward mass customization of products and services often contribute to this challenge.<sup>29</sup> Owing to the drawbacks just described, bureaucratic structures often depress organizational performance under such circumstances. For this reason, entry into the stage of transformation is accompanied by the task of converting bureaucratic structures into either of two postbureaucratic alternatives, the modular structure or the virtual structure.

Both of these postbureaucratic structures are organic, meaning that they are based on decentralized decision making and mutual adjustment conducted with the assistance of computerized networks rather than on centralization and hierarchy with direct supervision or standardization. As a consequence, both are quite flexible. Choices between the two involve trade-offs between completing the entire process of design, production, and distribution within the confines of a single organization, in the case of the modular structure, and relying on a network of several organizations connected by temporary alliances, in the case of the virtual structure. At this advanced stage of growth and development, choices pertaining to organization design are influenced by two contingency factors: environmental turbulence and transaction costs.

### **Environmental Turbulence**

The term **environmental turbulence** describes the speed and scope of change that occurs in the environment surrounding an organization. High turbulence is characterized by simultaneous and extremely high levels of environmental change, complexity (therefore uncertainty), and diversity, as well as rapid technological advances including the use of team-managed technologies. Such conditions, sometimes labeled *hypercompetitive*, require flexibility beyond the limits of bureaucracy, necessitating progression to postbureaucratic structures.<sup>30</sup> At the other extreme, low turbulence exists when levels of environmental change, complexity, diversity, and technological considerations are not simultaneous or less extreme in effect. The flexibility required by such conditions can be supplied in traditional bureaucratic structures by adding lateral linkages or opting for matrix or multiunit structuring, as suggested by the technological and environmental contingency models discussed earlier.

By determining the degree of flexibility and adaptability an organization must have to perform effectively, the level of environmental turbulence can also act as a contingency factor that influences choices between the two postbureaucratic alternatives. Compared with bureaucratic structures, modular structures are far more flexible.<sup>31</sup> For instance, General Electric's decision to allow its units to function as independent entities has enabled each of the company's businesses—consumer finance, jet engines and avionics, military contracting, and so on—to adapt itself to its own competitive situation without affecting the operations of other units.

Relying on temporary associations, as in virtual structures, allows for even greater flexibility. Such associations, in the form of short-term contracts or longer-term joint-venture relationships, are easier to modify and eliminate than are the interconnections among parts of a single firm.<sup>32</sup> For example, after IBM, Apple, and Motorola combined forces to design a new computer memory chip and introduce it to computer manufacturers throughout the world, the companies disbanded joint operations, retrieved the resources they had loaned to the Power PC project, and moved on to other activities of their own.<sup>33</sup> In sum, whereas high levels of environmental turbulence push for the adoption of modular structures, extremely high levels encourage the use of virtual structures.

### Transaction Costs

Decisions about “doing it yourself” in a modular structure versus “contracting it out” in a virtual structure also boil down to a comparison of the costs of sustaining a single organization and maintaining a unified structure, on the one hand, with the costs of writing acceptable contracts and ensuring contractual compliance, on the other. As suggested by economist Oliver Williamson, such **transaction costs** represent a second contingency factor that influences whether managers opt for the permanence of a single organization or the transience of temporary relationships.<sup>34</sup>

Transaction costs associated with preserving a single company or maintaining contractual relationships are affected by two important considerations. First, people are limited in the amount of information they can process, and greater complexity in a particular business situation creates a need for information processing that can prove overwhelming. This situation makes contracting out work difficult, because it increases feelings of uncertainty on the part of contractors. In turn, uncertainty increases the reluctance of prospective contractors to consign costly resources or commit to long-term relationships. Consider, for instance, the situation in which you are looking for an apartment to rent. Are you likely to sign a lease for an apartment that you have never seen, monthly payments that have yet to be specified, or a period of time that may change without notice? Or are you more likely to sign a lease when you know exactly which apartment you will live in, what your monthly payments will be, and how long the lease will last? For most people, the uncertainty of the first alternative makes it the less attractive of the two options.

In contrast, creating a single organization can help in coping with human limitations in the face of complexity because it affords a sense of social stability and permanence. Containing business transactions within a single organization also allows the use of basic coordination mechanisms and makes it easier to involve many more people in decision making. All of these factors help reduce the uncertainty of work relationships. People who opt for co-ops or condominiums instead of apartments are, to some extent, buying into a permanent organization. This type of organization provides them with the greater stability of permanent ownership and unites them with other owners who share similar interests in housing quality and affordability. Items that might otherwise require a contract among co-owners can be handled through periodic meetings in which the owners discuss problems and negotiate acceptable solutions.

Second, contracting becomes more difficult and the transaction costs of contractual relationships are increased by the threat that one or more contractors will use deception and seek to profit at the expense of the others. The threat of opportunism becomes especially troublesome when few prospective contractors are available, because the low substitutability affords them power, which in turn enables them to demand special treatment (see Chapter 11). Opportunism also emerges as an issue when uncertainty hides the true intentions of

contractors, blocking efforts to verify their honesty. In the absence of such verification, contractors are well advised to prepare for the worst and expect deceit. Costly surveillance should be conducted to detect opportunism before it can prove destructive.

Thus, considerations of bounded rationality and complexity drive up the transaction costs of contracting. In such situations—where uncertainty about the future undermines temporary relationships—the modular structure is favored. Likewise, concerns about opportunism increase the transaction costs of contracting and favor the modular structure. In contrast, the virtual structure is preferable when prospective contractors can negotiate good-faith contracts that are fair to all parties, honest in intention, and verifiable in every regard.<sup>35</sup>

### Final Considerations

For large organizations that have progressed through the developmental stages of formalization and elaboration, transition to a modular structure is a matter of forming teams and giving them autonomy by decentralizing operations and reducing middle management. Transition to the virtual structure is more dramatic, requiring massive downsizing and the formation of contractual relationships. General Motors' North American operations appear headed in this direction, as GM's management is selling off the company's parts-manufacturing facilities and relying more heavily on outside contractors.

For small organizations that have jumped directly from inception or early formalization to transition, adoption of a modular structure means rapid growth through merger or internal expansion. In contrast, movement into a virtual structure requires the identification of prospective contractors and development of contractual relationships.

If successful, transitions that occur during the stage of transformation result in postbureaucratic structures that enable companies to act as both large and small entities simultaneously. Through mutual adjustment and decentralization, firms are able to realize extensive flexibility. Through large size, whether real or virtual, firms are able to control the scope of resources needed to accomplish complex tasks in an efficient manner. Key to the success of such organizations are the information-processing networks that tie their members together. In the absence of modern computer equipment and the intranets or internets it supports, postbureaucratic structures could not exist.

### Summary

*Organization design* is the process of structuring an organization to enhance its *organizational effectiveness* in the light of the *contingency factors* with which it must deal. As they develop, organizations grow through the stages of *inception*, *formalization*, *elaboration*, and *transformation*. During inception, structural effectiveness is influenced by the contingency factors of *organization size* and *ownership norms*. Managers choose between the pre-bureaucratic alternatives of the simple undifferentiated and simple differentiated structures. During the stages of formalization and elaboration, structural effectiveness becomes a function of the contingency factors of *core technology* and *external environment*. Managers then choose between the bureaucratic alternatives of functional, divisional, matrix, and multiunit structures. During the stage of transformation, structural effectiveness is shaped by the contingency factors of *environmental turbulence* and *transaction costs*. In this stage, managers choose between the postbureaucratic alternatives of modular and virtual structures.

## Review Questions

1. Name a specific business organization in your community and identify three of its most important constituency groups. What interests do each of the constituency groups expect the organization to fulfill? How does the organization's structure affect its ability to satisfy these interests? Is the company effective?
2. Why do organizations in the inception stage usually have prebureaucratic structures? What effects does organization size have on organization design at this stage?
3. Explain why environmental change impedes an organization's ability to coordinate by means of standardization. What sort of coordination is used instead? Why does environmental complexity push an organization toward decentralization?
4. How does the developmental stage of transformation differ from the stages of formalization and elaboration? Why does this difference push the organization toward the adoption of a postbureaucratic structure? How do environmental turbulence and transaction costs affect the process of organization design at this developmental stage?

# Culture, Change, and Organization Development

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Managing the organization, as an organization, is a complex, demanding task. As discussed in Chapters 11 through 13, the management of macro organizational behavior requires that managers deal with issues of power, conflict, structure, and organization design. In addition, as will be discussed in this chapter, managers must assess and actively shape the culture of norms, values, and ways of thinking that influence behavior throughout the firm. As they deal with all of these issues, managers must also solve problems originating in change processes and the outcomes these processes bring forth.

For this reason, Chapter 14 discusses the topics of organizational culture, change, and development. It first focuses on organizational culture, indicating how a firm's culture affects and reflects issues of power, structure, and organization design. Next, the chapter discusses issues associated with change in organizations and introduces organization development as a process of change management. It concludes by describing organization development interventions that managers can use to initiate change aimed at resolving many of the problems identified throughout this book.

## Organization Culture

Every *formal* organization of prescribed jobs and structural relationships includes an *informal* organization characterized by unofficial rules, procedures, and interconnections. This informal organization arises as employees make spontaneous, unauthorized changes in the way things are done. In discussing emergent role characteristics (Chapter 8) and group development (Chapter 9), we have already discussed to some extent how day-to-day adjustments occur in organizations. As these informal adjustments shape and change the formal way of doing things, a culture of attitudes and understandings emerges that is shared among co-workers. This culture is a “pattern of basic assumptions—invented, discovered, or developed [by a firm's members] to cope with problems of external adaptation and internal integration—that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.”<sup>1</sup>

An organization's **culture** is therefore an informal, shared way of perceiving life and membership in the organization that binds members together and influences what they think about themselves and their work.

In the process of helping to create a mutual understanding of organizational life, organizational culture fulfills four basic functions. First, it *gives members an organizational identity*.

That is, sharing norms, values, and perceptions provides people with a sense of togetherness that promotes a feeling of common purpose. Second, it *facilitates collective commitment*. The common purpose that grows out of a shared culture tends to elicit feelings of attachment among all those who accept the culture as their own. Third, it *promotes organizational stability*. By nurturing a shared sense of identity and commitment, culture encourages lasting integration and cooperation among the members of an organization. Fourth, it shapes behavior by *helping members make sense of their surroundings*. An organization's culture serves as a source of shared meanings that explain why things occur in the way that they do.<sup>2</sup> By fulfilling these four basic functions, the culture of an organization serves as a sort of social glue that helps reinforce persistent, coordinated behaviors at work. In so doing, an organization's culture can enhance its performance and serve as a valuable source of competitive advantage.<sup>3</sup>

### Elements of Organization Culture

Deep within the culture of every organization is a collection of fundamental norms and values that shapes members' behaviors and helps them understand the surrounding organization. In some companies, such as Polaroid, 3M, and DuPont, cultural norms and values emphasize the importance of discovering new materials or technologies and developing them into new products. In other companies, such as AT&T and Whirlpool, cultural norms and values focus on attaining high product quality.<sup>4</sup> Such fundamental norms and values serve as the ultimate source of the shared perceptions, thoughts, and feelings constituting the culture of an organization.<sup>5</sup>

These fundamental norms and values are expressed and passed from one person to another through *surface elements* of the culture, such as those overviewed in Table 14.1, that help employees interpret everyday organizational events.<sup>6</sup> One type of surface element, **ceremonies**, exemplifies and reinforces important cultural norms and values. Ceremonies

**Table 14.1** Surface Elements of Organization Cultures

<i>Element</i>	<i>Description</i>
Ceremonies	Special events in which organization members celebrate the myths, heroes, and symbols of their firm
Rites	Ceremonial activities meant to communicate specific ideas or accomplish particular purposes
Rituals	Actions that are repeated regularly to reinforce cultural norms and values
Stories	Accounts of past events that illustrate and transmit deeper cultural norms and values
Myths	Fictional stories that help explain activities or events that might otherwise be puzzling
Heroes	Successful people who embody the values and character of the organization and its culture
Symbols	Objects, actions, or events that have special meanings and enable organization members to exchange complex ideas and emotional messages
Language	A collection of verbal symbols that often reflect the organization's particular culture

include special events in which the members of a company celebrate the myths, heroes, and symbols of their culture.<sup>7</sup> In sales-focused organizations such as Mary Kay or Amway, annual ceremonies are held to recognize and reward outstanding sales representatives. Holding these ceremonies is intended to inspire sales representatives who have been less effective to adopt the norms and values of their successful colleagues. Whether they personify the “Mary Kay approach” or the “Amway philosophy,” the people who are recognized and rewarded in these ceremonies greatly enhance the attractiveness of their companies’ cultural underpinnings.

Often, organizational ceremonies incorporate various **rites**, or ceremonial activities meant to send particular messages or accomplish specific purposes.<sup>8</sup> For instance, *rites of passage* are used to initiate new members into the organization and can convey important aspects of the culture to them. In some businesses, new recruits are required to spend considerable time talking with veteran employees and learning about cultural norms and values by listening to stories about their experiences at work. In other companies, the rite of passage consists of a brief talk about company rules and regulations delivered by a human resources staff member to newcomers during their first day at work. Little more than a formal welcoming, it does not really help newcomers learn about the culture of the firm.

When employees are transferred, demoted, or fired because of low productivity, incompatible values, or other personal failings, *rites of degradation* may draw the attention of others to the limits of acceptable behavior. Today, rites of degradation are typically deemphasized, involving little more than quiet reassignment. In the past, they were occasionally much more dramatic. In the early days of NCR, for example, executives who had incurred the founder’s wrath sometimes learned that they had lost their jobs by discovering their desks burning on the lawn in front of corporate headquarters.

*Rites of enhancement* also emphasize the limits of appropriate behavior, but in a positive way. These activities, which recognize increasing status or position in a firm, may range from simple promotion announcements to intricate recognition ceremonies, such as the Mary Kay and Amway ceremonies just described.

In *rites of integration*, members of an organization become aware of the common feelings that bond them together. Official titles and hierarchical differences may be intentionally ignored in rites of this sort so that members can get to know one another as people rather than as managers, staff specialists, clerks, or laborers. At many companies, “TGIF” parties are held every week to give employees the opportunity to chat informally over pizza and drinks. Company picnics, golf outings, softball games, and holiday parties can also serve as rites of integration.

A rite that is repeated on a regular basis becomes a **ritual**, a ceremonial event that continually reinforces key norms and values. The morning coffee break, for example, is a ritual that can strengthen important workplace relationships. So, too, is the annual stockholder meeting held by management to convey cultural norms and values to company shareholders. Just as routine coffee breaks enable co-workers to gossip among themselves and reaffirm important interpersonal relationships, annual stockholder meetings give the company the opportunity to strengthen connections between itself and people who would otherwise have little more than a limited financial interest in its continued well-being.

**Stories** are accounts of past events with which all employees are familiar and that serve as reminders of cultural values.<sup>9</sup> As organization members tell stories and think about the messages conveyed by the stories, the concrete examples described in this manner facilitate their later recall of the concepts presented. Stories also provide information about historical events in the development of a company that can improve employees’ understanding of the present:



In one organization, employees tell a story about how the company avoided a mass layoff when almost every other company in the industry . . . felt forced to lay off employees in large numbers. The company . . . managed to avoid a layoff of 10 percent of their employees by having everyone in the company take a 10 percent cut in salary and come to work only 9 out of 10 days. This company experience is thus called the “nine-day fortnight.”<sup>10</sup>

The story of the nine-day fortnight vividly captures a cultural value—namely, that looking after employees’ well-being is the right thing to do. Present-day employees continue to tell the story because it reminds them that their company will avoid layoffs as much as possible during economic downturns.

A **myth** is a special type of story that provides a fictional but plausible explanation for an event or thing that might otherwise seem puzzling or mysterious. Ancient civilizations often created myths about gods and other supernatural forces to explain natural occurrences, such as the rising and setting of the sun, the phases of the moon, and the formation of thunderstorms. Similarly, the members of a modern-day organization may develop fictionalized accounts of the company’s founders, origins, or historical development to provide a framework for explaining current activities in their firm.

In many instances, organizational myths contain at least a grain of truth. For example, myths retold throughout General Motors about the management prowess of Alfred P. Sloan, one of the company’s earliest chief executives, are based in part on a study of GM’s structure and procedures that Sloan performed from 1919 to 1920. This bit of truthful information makes myths sound completely true.

**Heroes** are people who embody the values of an organization and its culture:

Richard A. Drew, a banjo-playing college dropout working in 3M’s research lab during the 1920s, [helped] some colleagues solve a problem they had with masking tape. Soon thereafter, DuPont came out with cellophane. Drew decided he could do DuPont one better and coated the cellophane with a colorless adhesive to bind things together—and Scotch tape was born. In the 3M tradition, Drew carried the ball himself by managing the development and initial production of his invention. Moving up through the ranks, he went on to become technical director of the company and showed other employees just how they could succeed in similar fashion at 3M.<sup>11</sup>

Heroes such as 3M’s Drew serve as role models, illustrating personal performance that is not only desirable but attainable. Like stories, heroes provide concrete examples that make the guiding norms and values of a company readily apparent.

**Symbols** are objects, actions, or events to which people have assigned special meanings. Company logos, flags, and trade names are all familiar symbols. For example, Mercedes’s three-point star logo is synonymous with quality in most people’s minds, and even the youngest children know that the McDonald’s arches mark the locations of fast-food restaurants. Symbols represent a conscious or unconscious association with some wider, usually more abstract, concept or meaning.<sup>12</sup> In organizations, they may include official titles, such as chief operating officer. Special eating facilities, official automobiles, or airplanes also may be given symbolic status. Sometimes even the size of an employee’s office or its placement or furnishings have special symbolic value.<sup>13</sup>

Symbols mean more than might seem immediately apparent. For instance, despite the fact that a reserved parking space consists of just a few square feet of asphalt, it may symbolize its

holder's superior hierarchical status or clout. It is this ability to convey a complex message in an efficient, economical manner that makes symbols so useful and important:

When two people shake hands, the action symbolizes their coming together. The handshake may also be rich in other kinds of symbolic significance. Between free-masons it reaffirms a bond of brotherhood, and loyalty to the order to which they belong. Between politicians it is often used to symbolize an intention to cooperate and work together. The handshake is more than just a shaking of hands. It symbolizes a particular kind of relationship between those involved.<sup>14</sup>

Clearly, symbols are absolutely necessary to communication. They convey emotional messages that cannot easily be put into words. Without symbols, many of the fundamental norms and values of an organization's culture could not be shared among organizational members.

**Language** is another means of sharing cultural ideas and understandings. In many organizations, the language used by members reflects the organization's particular culture.<sup>15</sup> Dot-com companies were well known for referring to the use of loaned funding in terms of "burn rate." *Bandwidth*, a term once used in Internet firms to indicate message capacity, has now become part of the larger U.S. national culture.<sup>16</sup>

### Managing Organization Culture

Organizational culture grows out of informal, unofficial ways of doing things. In turn, it influences the attitudes that employees hold and the behaviors in which they engage at work, thereby shaping the way that employees perceive and react to formally defined jobs and structural arrangements.<sup>17</sup> These relationships arise because cultural norms and values provide **social information** that helps employees determine the meaning of their work and the organization around them.<sup>18</sup> For example, in a company that follows a policy of promotion from within—wherein managers are chosen from among eligible subordinates rather than being hired from outside the firm—employees tend to view their jobs as critical to personal success. By encouraging employees to perceive success as something to be valued and pursued, cultural norms stressing the importance of hard work also encourage the development of a need for achievement (see Chapter 5) and motivate high productivity. In sum, as indicated in Figure 14.1, cultural norms and values convey social information that can influence the way people choose to behave on the job. They do so by affecting the way employees perceive themselves, their work, and the organization.

Can organizational culture be managed? It might seem that the answer to this question should be "no," for the following reasons:

1. Cultures are so spontaneous, elusive, and hidden that they cannot be accurately diagnosed or intentionally changed.
2. Considerable experience and deep personal insight are required to truly understand an organization's culture, making management infeasible in most instances.
3. Several subcultures may exist within a single organizational culture, complicating the task of managing organizational culture to the point where it becomes impossible.
4. Cultures provide organization members with continuity and stability. As a consequence, members are likely to resist even modest efforts at cultural management or change because they fear discontinuity and instability.<sup>19</sup>

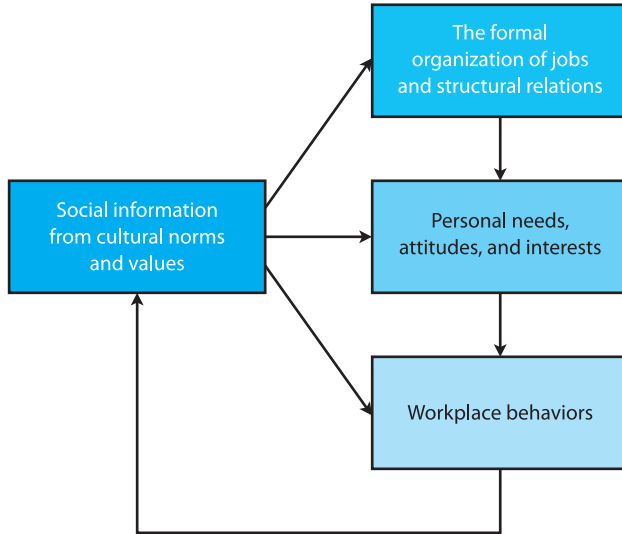


Figure 14.1 Cultural Elements as Social Information

Many experts disagree with these arguments, however, and suggest that organizational cultures can be managed by using either of two general approaches.

In the first approach, **symbolic management**, managers attempt to influence deep cultural norms and values by shaping the surface cultural elements, such as symbols, stories, and ceremonies, that people use to express and transmit cultural understandings.<sup>20</sup> Managers can accomplish this shaping in several ways. For example, they can issue public statements about their vision for the future of the company. They can recount stories about themselves and the company. They can use and enrich the shared company language. In this way, managers not only communicate the company's central norms and key values, but also devise new ways of expressing them.

Managers who practice symbolic management realize that every managerial behavior broadcasts a message to employees about the organization's norms and values. They consciously choose to do specific things that will symbolize and strengthen a desirable culture. The fact that symbolic management involves the manipulation of symbols is apt to lead some managers to underestimate its importance. Telling stories, performing ceremonies, and anointing heroes might seem soft-headed or a waste of time to managers who do not understand the importance of managing culture. In reality, playing down the importance of symbolic management can have disastrous consequences. Managers at companies ranging from Disney to DuPont agree that managing symbols—and the culture they support—is critical to organizational success.<sup>21</sup>

The second approach to managing organizational culture is to use **organization development (OD)** interventions. OD interventions such as those described in the following section, can contribute to cultural management by helping the members of an organization progress through the following steps:

1. *Identifying current norms and values.* OD interventions typically require people to list the norms and values that influence their attitudes and behaviors at work. This kind of list gives members insight into the organization culture.

2. *Plotting new directions.* OD interventions often make it possible for the members of an organization to evaluate present personal, group, and organization goals and to consider whether these goals represent the objectives they truly want to achieve. Such evaluations often point out the need to plot new directions.
3. *Identifying new norms and values.* OD interventions that stimulate thinking about new directions also provide organization members with an opportunity to develop new norms and values that will promote a move toward the desirable new goals.
4. *Identifying culture gaps.* To the extent that current (step 1) and desired (step 3) norms and values are articulated, the OD process enables organization members to identify culture gaps—that is, the differences between the current and desired situations.
5. *Closing culture gaps.* OD interventions give people the opportunity to reach agreements stating that new norms and values should replace old ones and that every employee should take responsibility for managing and reinforcing change.<sup>22</sup>

When people engage in behaviors that are consistent with the new norms and values developed in an OD intervention, they reduce culture gaps and, in effect, change the organization's culture.

## Change and Organization Development

Besides stimulating and solidifying cultural change, **organization development** entails the more general process of planning, implementing, and stabilizing the results of any type of organizational change. In addition, the OD field of research specializes in developing and assessing specific **interventions**, or change techniques.<sup>23</sup> As both a management process and a field of research, OD is characterized by five important features:

1. *OD emphasizes planned change.* The OD field evolved out of the need for a systematic, planned approach to managing change in organizations. OD's emphasis on planning distinguishes it from other processes of change in organizations that are more spontaneous or less methodical.
2. *OD has a pronounced social-psychological orientation.* OD interventions can stimulate change at many different levels—interpersonal, group, intergroup, or organizational. The field of OD is, therefore, neither purely psychological (focused solely on individuals) nor purely sociological (focused solely on organizations), but rather incorporates a mixture of both orientations.
3. *OD focuses primary attention on comprehensive change.* Although every OD intervention focuses on a specific organizational target, the effects on the total system are seen as equally important. No OD intervention is designed and implemented without considering its broader implications.
4. *OD is characterized by a long-range time orientation.* Change is an ongoing process that can sometimes take months—or even years—to produce the desired results. Although managers often face pressures to produce quick, short-term gains, the OD process is not intended to yield stopgap solutions.
5. *OD is guided by a change agent.* OD interventions are designed, implemented, and assessed with the help of a *change agent*, an individual who may be a specialist within the organization or a consultant brought in from outside the firm, and who serves as both a catalyst for change and a source of information about the OD process.<sup>24</sup>

Together, these five features suggest the following definition: *Organization development*

*is a planned approach to interpersonal, group, intergroup, and organizational change that is comprehensive, long-term, and under the guidance of a change agent.*

**Resistance to Change**

**Change** means to alter, vary, or modify existing ways of thinking or behaving. In organizations, change is both an important impetus and a primary product of OD efforts, reshaping the ways in which people and groups work together. Change in organizations is pervasive, meaning that it is a normal and necessary part of being organized.<sup>25</sup> Whenever managers attempt to set any change in motion, however, they must expect resistance, because people tend to reject what they perceive as a threat to the established way of doing things. The more drastic the change, the more intense the resulting resistance is likely to be.

Setting change in motion requires identifying and overcoming sources of resistance, on the one hand, and encouraging and strengthening sources of support, on the other hand. **Force field analysis** is a diagnostic method that diagrams the array of forces acting for and against a particular change in a graphic analysis. This tool is useful for managers and change agents who are attempting to visualize the situation surrounding a prospective change.

Figure 14.2 depicts a typical force field analysis. The figure includes two lines: one representing an organization’s present situation and the other representing the organization after the desired change has been implemented. Forces identified as supporting change are shown as arrows pushing in the direction of the desired change, and forces resisting change are drawn as arrows pushing in the opposite direction. The length of each arrow indicates the perceived strength of the force relative to the other forces in the force field.

The specific situation represented in the figure occurred during the early 21st century, when General Motors established production facilities in Lansing, Michigan, intended to produce a new line of luxury cars aimed at retaking market share recently lost to European and

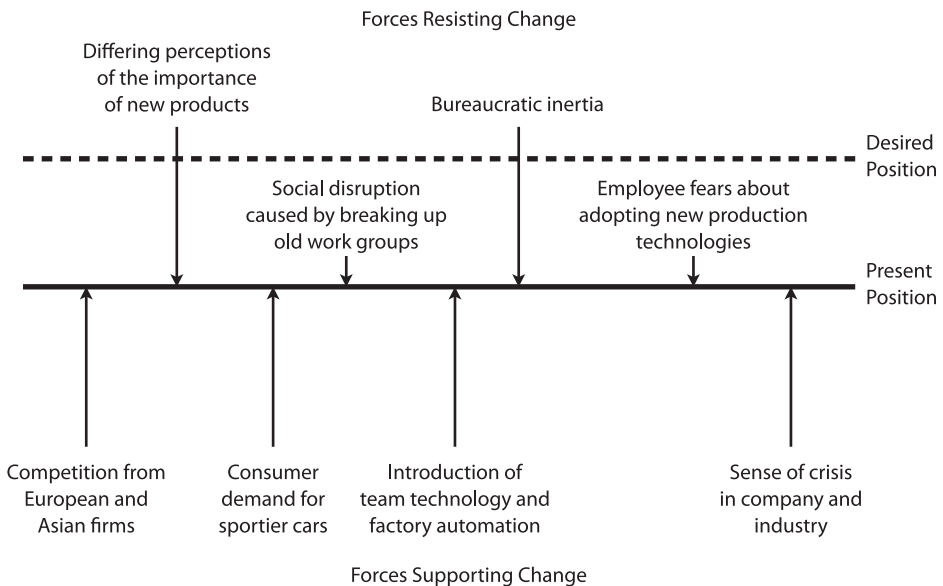


Figure 14.2 Force Field Analysis

Asian nameplates such as Lexus, Infiniti, and BMW. Forces resisting this change included the following:

- differing perceptions among GM's managers about the need for new products and production facilities (as opposed to continuing to sell minor modifications of existing lines)
- differing perceptions of the importance of new products
- concerns of employees in GM's other plants about the social disruption likely to occur as old work groups disbanded to staff the new production facilities
- bureaucratic inertia stemming from the rules and procedures used to coordinate existing ways of doing things
- employee fears about not being able to cope with the demands of new production technologies

Opposing these forces were others supporting change:

- U.S. consumer interests in greater sportiness in luxury automobiles
- a drive among auto manufacturers to introduce team-based production technologies and greater factory automation, so as to increase quality and control costs
- a general sense of unease in the U.S. auto industry

In the end, forces supporting change won out, with GM launching new Cadillac models that proved to be quite successful in the marketplace.

There is no universal, fail-safe way to overcome the resistant factors identified in a force field analysis. Of the many options available, six are used most often:

1. *Education and communication.* Information about the need and rationale for a prospective change can be disseminated through one-on-one discussions, group meetings, and written memos or reports. An educational approach is most appropriate where change is being undermined by a lack of information or where available information is inaccurate. Its strength is that, once persuaded through education, people will often help with the implementation of change. Its primary weakness is that education can be quite time-consuming if many people must be involved.
2. *Participation and involvement.* Individuals who will be affected by an intervention should be involved in its design and implementation. Thus employees should meet in special committees or task forces to participate in the decision making. Participation works well when the information required to manage change is dispersed among many people and when employees who have considerable power are likely to resist change if they are not directly involved in the initiation. This approach facilitates information exchange among people and breeds commitment among the people involved, but it can slow down the process if participants design an inappropriate change or stray from the task at hand.
3. *Facilitation and support.* Needed emotional support and training in topics related to organizational behavior should be provided through instructional meetings and counseling sessions for employees affected by a change. This method is most useful when people are resisting change because of problems with personal adjustment. Although no other method works as well with adjustment problems, facilitation efforts can consume significant amounts of time and money and still fail.
4. *Bargaining and negotiation.* Bargaining with resistant employees can provide them with incentives to change their minds. This technique is sometimes used when an individual or group with the power to block a change is likely to lose out if the change takes place.

Negotiation can be a relatively easy way to avoid such resistance but can prove costly if it alerts other individuals and groups that they might be able to negotiate additional gains for themselves.

5. *Hidden persuasion.* Covert efforts can sometimes be implemented on a selective basis to persuade people to support desired changes. This approach is employed when other tactics will not work or are too costly. It can be a quick and inexpensive way to dissolve resistance, but can lead to future problems if people feel that they are treated unfairly. Covert persuasion may seem overly manipulative in retrospect, even if it leads to suitable results.
6. *Explicit and implicit coercion.* Power and threats of negative consequences may be employed to change the minds of resistant individuals. Coercion tends to be favored when speed is essential and individuals initiating change possess considerable power. It can overcome virtually any kind of resistance. Its weakness is that it can risk leaving people angry.<sup>26</sup>

### Action Research

Organization development is a structured, multiple-step process. The **action research model** is a detailed variation of this process that promotes adherence to the scientific method (see Chapter 16) and places particular emphasis on post-change evaluation.<sup>27</sup> As indicated in Figure 14.3, it consists of seven stages, with the latter four forming a recurrent cycle.

In the initial stage of action research, *problem identification*, someone in an organization perceives problems that might be solved with the assistance of an OD change agent. Specific problem statements can usually be formulated at this stage. Sometimes, however, problem identification cannot progress beyond an uneasy feeling that something is wrong. Consultation with a change agent may then be required to crystallize the problems.

In the second stage, *consultation*, the manager and change agent clarify the perceived problems and consider ways of dealing with them. During this discussion, they assess the degree of fit between the organization's needs and the change agent's expertise. If the agent fits the situation, action research progresses to the next stage. If not, then another change agent is sought and consultation begins anew.

In the third stage, *data gathering and provisional diagnosis*, the change agent initiates the diagnostic process by gathering data about the organization and its perceived problems. The agent observes, interviews, and questions employees and analyzes performance records. A member of the organization may assist during this process, facilitating the agent's entry into the firm and providing access to otherwise hidden or unavailable data. The change agent concludes this stage by examining the data and performing a provisional analysis and diagnosis of the situation.

Next, during the stage of *feedback to the client organization*, the change agent submits data and provisional diagnosis to the client organization's top management group. Informing top management at an early point that the OD process is under way is crucial for securing the managerial support that any OD effort must have to succeed. During the feedback presentation, the change agent must be careful to preserve the anonymity of people serving as sources of information. Identifying them could jeopardize their openness and willingness to cooperate later, especially if they possess information that might prove unflattering to management or portray the organization in negative terms.

During the fifth stage of action research, *joint diagnosis and action planning*, the change agent and the top management group discuss the meaning of the data, their implications for organizational functioning, and needs for additional data gathering and diagnosis. At this point, other people throughout the organization may also become involved in the diagnostic

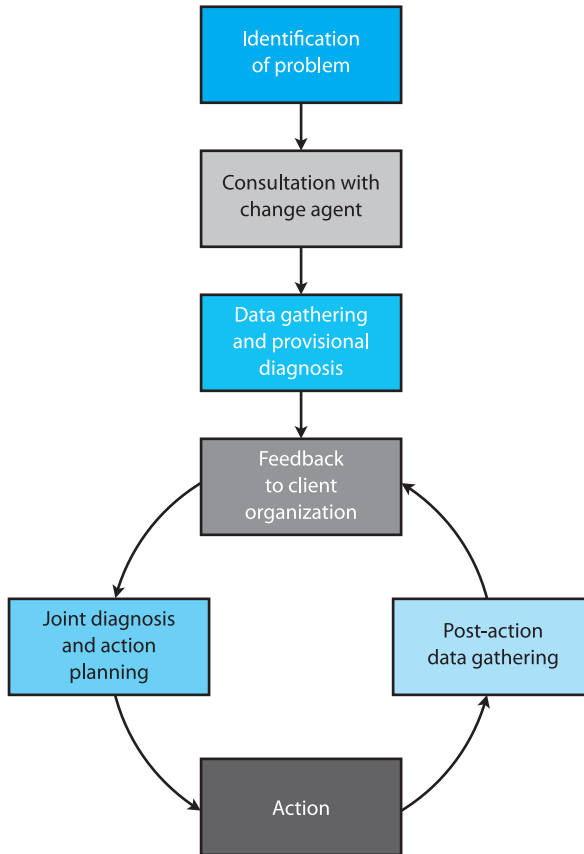


Figure 14.3 The Action Research Model

process. Sometimes, employees meet in feedback groups and react to the results of top management's diagnostic activities. At other times, work groups elect representatives, who then meet to exchange views and report back to their co-workers. If the firm is unionized, union representatives may be consulted as well. Throughout the action research process, the change agent must be careful not to impose any interventions on the client organization. Instead, members of the organization should deliberate jointly with the change agent and work together to develop wholly new interventions and plan specific action steps.

Next, the company puts the plan into motion and executes its action steps. In addition to the jointly designed intervention, the *action* stage may involve such activities as additional data gathering, further analysis of the problem situation, and supplementary action planning.

Because action research is a cyclical process, data are also gathered after actions have been taken during the stage of *post-action data gathering and evaluation*. Here the purpose of the activity is to monitor and assess the effectiveness of an intervention. In their evaluation, groups in the client organization review the data and decide whether they need to re-diagnose the situation, perform more analyses of the situation, and develop new interventions. During this process, the change agent serves as an expert on research methods as applied to the process of development and evaluation. In filling this role, the agent may perform data analyses, summarize the results of these analyses, guide subsequent re-diagnoses, and position the organization for further intervention.



## Organization Development Interventions

Many different OD interventions—perhaps hundreds—can be selected on the basis of data gathered through action research and used to facilitate the stages of joint diagnosis and action planning, action, and post-action data gathering and evaluation just described. This section overviews eight of these interventions. As indicated in Table 14.2, they differ from one another in terms of target and depth.

The **target** of an OD intervention is the intervention's focus. Interpersonal, group, intergroup, and organizational relations can all serve as targets of OD interventions. Associated with these targets are various kinds of problems, as shown in Table 14.2 and indicated in earlier chapters of this book.

An intervention's **depth** reflects the degree or intensity of change that the intervention is designed to stimulate.<sup>28</sup> A *shallow* intervention is intended mainly to provide people with information or to facilitate communication and minor change. In contrast, a *deep* intervention is intended to effect massive psychological and behavioral change. An intervention of this type challenges basic beliefs, values, and norms in an attempt to bring about fundamental changes in the way people think, feel, and behave.

### Interpersonal Interventions

Interpersonal interventions focus on solving problems with interpersonal relations, such as those described in Chapter 8. Depending on the particular intervention, the organization may attempt to redefine personal roles, clarify social expectations, or strengthen sensitivity to others' needs and interests.

#### Role Negotiation Technique

The **role negotiation technique** (RNT), an interpersonal intervention of moderately shallow depth, is intended to help people form and maintain effective working relationships.<sup>29</sup> As indicated in Chapter 8, people at work fill specialized *roles* in which they are expected to engage in specific sorts of behavior. Often, however, they lack a clear idea of what their roles entail, or they are overburdened by role demands. RNT (as diagrammed in Figure 14.4) is intended to reduce role ambiguity and conflict by clarifying interpersonal expectations and responsibilities.

Table 14.2 Organization Development Interventions

Target	Focal problem	Depth	
		Shallow	Deep
Interpersonal relations	Problem fitting in with others	Role negotiation technique	Sensitivity training
Group relations and leadership	Problem with working as a group	Process consultation	Team development
Intergroup relationships	Problem with relationships between groups	Third-party peacemaking	Intergroup team building
Organization-wide relationships	Problem with functioning effectively	Survey feedback	Open system planning

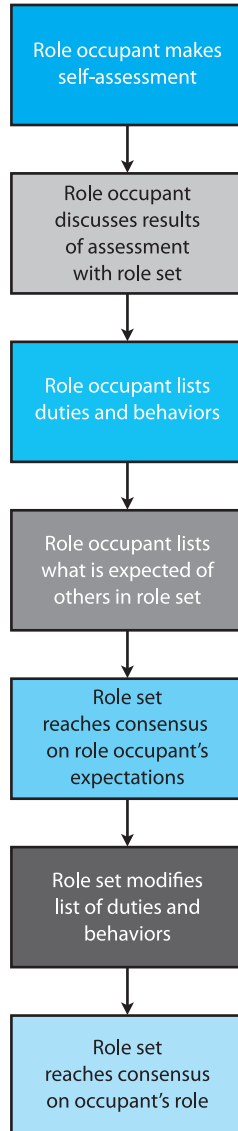


Figure 14.4 Steps in the Role Negotiation Technique

To initiate an RNT intervention, the occupant of a troublesome role contacts a change agent about his or her problem and receives instruction from the agent on the RNT procedure. The role occupant then works alone to analyze the rationale for the role as well as its place in the organizational network of interpersonal relations. This individual tries to learn how to use his or her role in meeting personal, group, and organizational goals.

Next, the role occupant discusses the results of the analysis in a meeting attended by everyone whose work is directly affected by his or her role. During this discussion, the change agent lists on a blackboard or flip chart the specific duties and behaviors of the role as identified by the role occupant. The rest of the group suggests corrections to this list.

Behaviors are added or deleted until the role occupant is satisfied that the role he or she performs is defined accurately and completely.

In the next phase of the RNT process, the change agent directs attention to the role occupant's expectations of others. To begin this step, the role occupant lists his or her expectations of those roles that are connected with his or her own. The group then discusses and modifies these expectations until everyone agrees on them. Afterward, all participants have the opportunity to modify their expectations about the person's role, in response to his or her expectations of them. Thus, as its name indicates, RNT involves a process of negotiation. The person who is the focus of the intervention can ask others to do things for him or her, and others can ask the role occupant to do something for them in return.

In the final step of the role negotiation technique, the role occupant writes a summary or profile of his or her role as it has been defined through the RNT process. This profile specifies which behaviors are required and which are discretionary. Thus it constitutes a clearly defined listing of the role-related activities that the role occupant will perform. The meeting then continues, focusing on the roles of the other RNT participants, until all relevant interpersonal relationships have been clarified.

### *Sensitivity Training*

As a deep interpersonal intervention, **sensitivity training** focuses on developing greater sensitivity to oneself, to others, and to one's relations with others.<sup>30</sup> Designed to promote emotional growth and development, it typically takes place in a closed session away from work. It may involve a collection of people who do not know each other, a group of people who are well acquainted, or a combination of both. A sensitivity training session may last for a period as brief as half a day or go on for several days. It is begun by a change agent, who announces that he or she will serve solely as a nondirective resource. The change agent then lapses into silence, leaving the participants with neither a leader nor an agenda to guide interpersonal activities. Putting people in such an ambiguous situation forces them to structure relations among themselves and, in the process, question long-held assumptions about themselves, about each other, and about how to conduct interpersonal relationships.<sup>31</sup>

Sensitivity training participants take part in an intense exchange of ideas, opinions, beliefs, and personal philosophies as they struggle with the process of structuring interpersonal relations. Here is a description of one four-day session:

The first evening discussion began with a rather neutral opening process, which very soon led to strongly emotional expression of concern. . . . By the second day the participants had begun to express their feelings toward each other quite directly and frankly, something they had rarely done in their daily work. As the discussion progressed it became easier for them to accept criticism without becoming angry or wanting to strike back. As they began to express long-suppressed hostilities and anxieties, the "unfreezing" of old attitudes, old values, and old approaches began. From the second day onward the discussion was spontaneous and uninhibited. From early morning to long past midnight the process of self-examination and confrontation continued. They raised questions they had never felt free to ask before. Politeness and superficiality yielded to openness and emotional expression and then to more objective analysis of themselves and their relationships at work. They faced up to many conflicts and spoke of their differences. There were tense moments, as suspicion, distrust, and personal antagonisms were aired, but most issues were worked out without acrimony.<sup>32</sup>

By completing this process, people learn more about their own personal feelings, inclinations, and prejudices and about what other people think of them.

A word of warning: Sensitivity training is a deep intervention that can initiate profound psychological change. Participants typically engage in intensely critical assessments of themselves and others that can be both difficult and painful. Therefore, the change agent overseeing sensitivity training *must* be a trained professional who can help participants deal with criticism in a constructive manner. In the absence of expert help, participants could risk serious psychological harm.<sup>33</sup>

### Group Interventions

Group interventions are designed to solve problems with group or team performance and leadership, such as those identified in Chapters 7 through 10. In general, these interventions focus on helping the members of a group learn how to work together to fulfill the group's task and maintenance requirements.

#### Process Consultation

**Process consultation** is a relatively shallow, group-level OD intervention. In a process consultation intervention, a change agent meets with a work group and helps its members examine group processes such as communication, leadership and followership, problem solving, and cooperation. The specific approach taken during this exploration, which varies from one situation to another, may include group meetings in which the following activities take place:

1. The change agent asks stimulus questions that direct attention to relationships among group members. Ensuing discussions between group members may focus on ways to improve these relationships as well as ways that such relationships can influence group productivity and effectiveness.
2. A process analysis session is held, during which the change agent watches the group as it works. This session is followed by additional feedback sessions in which the change agent discusses his or her observations about how the group maintains itself and how it performs its task. Supplementary feedback sessions may also allow the change agent to clarify the events of earlier sessions for individual group members.
3. The change agent makes suggestions that may pertain to group membership, communication, interaction patterns, and the allocation of work duties, responsibilities, and authority.<sup>34</sup>

Whatever the change agent's approach in a given situation, his or her primary focus in process consultation is on making a group more effective by getting its members to pay more attention to important *process* issues—that is, to focus on *how* things are done in the group rather than *what* is being done (the issues that normally dominate a group's attention). The ultimate goal of process consultation is to help the group improve its problem-solving skills by enhancing the ability of members to identify and correct faulty group processes.<sup>35</sup>

#### Team Development

**Team development** is a deep, group-level extension of interpersonal sensitivity training. In a team development intervention, a group of people who work together on a daily basis meet

over an extended period of time to assess and modify group processes.<sup>36</sup> Throughout these meetings, participants focus their efforts on achieving a balance of basic components of teamwork, such as the following:

- an understanding of, and commitment to, common goals
- involvement of as many group members as possible, to take advantage of the complete range of skills and abilities available to the group
- analysis and review of group processes on a regular basis, to ensure that sufficient maintenance activities are performed
- trust and openness in communication and relationships
- a strong sense of belonging on the part of all members<sup>37</sup>

To begin team development, the group first engages in a lengthy diagnostic meeting, in which a change agent helps members identify group problems and map out possible solutions. The change agent asks members to observe interpersonal and group processes and to be prepared to comment on what they see. In this way, group members work on two basic issues: looking for solutions to problems of everyday functioning that have arisen in the group, and observing the way group members interact with each other during the meeting.

Based on the results of these efforts, team development then proceeds in two specific directions. First, the change agent and group implement the interventions chosen during diagnosis to solve the problems identified by the group. Second, the change agent initiates group sensitivity training to uncover additional problems that might otherwise resist detection:

As the group fails to get [the change agent] to occupy the traditional roles of teacher, seminar leader, or therapist, it will redouble its efforts until in desperation it will disown him and seek other leaders. When they too fail, they too will be disowned, often brutally. The group will then use its own brutality to try to get the [change agent] to change his task by eliciting his sympathy and care for those it has handled so roughly. If this maneuver fails, and it never completely fails, the group will tend to throw up other leaders to express its concern for its members and project its brutality onto the consultant. As rival leaders emerge it is the job of the consultant, so far as he is able, to identify what the group is trying to do and explain it. His leadership is in task performance, and the task is to understand what the group is doing “now” and to explain why it is doing it.<sup>38</sup>

Group sensitivity training is really an interpersonal sensitivity training intervention conducted with an intact work group. It enables co-workers to critique and adjust the interpersonal relations problems that inevitably arise during the workday. For this reason, the same cautions mentioned for interpersonal sensitivity training are also relevant to group sensitivity training. Only a change agent trained to manage the rigors and consequences of a deep intervention should take a leadership role in this type of exercise.

### **Intergroup Interventions**

Intergroup interventions focus on solving many of the intergroup problems identified in Chapter 11. In general, these problems concern conflict and associated breakdowns in intergroup coordination. Thus OD interventions developed to manage intergroup relations involve various open communication techniques and conflict resolution methods.

### *Third-Party Peacemaking*

**Third-party peacemaking** is a relatively shallow intervention in which a change agent seeks to resolve intergroup misunderstandings by encouraging communication between or among groups. The change agent, who is not a member of any of the groups and is referred to as a third party, guides a meeting between the groups.<sup>39</sup> To be productive, the meeting must be characterized by the following attributes:

1. *Motivation*: All groups must be motivated to resolve their differences.
2. *Power*: A stable balance of power must be established between the groups.
3. *Timing*: Confrontations must be synchronized so that no one group can gain an information advantage over another.
4. *Emotional release*: People must have enough time to work through the negative thoughts and feelings that have built up between the groups. In addition, they need to recognize and express their positive feelings.
5. *Openness*: Conditions must favor openness in communication and mutual understanding.
6. *Stress*: There should be enough stress—enough pressure—on group members to motivate them to give serious attention to the problem, but not so much that the problem appears intractable.<sup>40</sup>

The change agent facilitates communication between the groups both directly and indirectly. He or she may interview group members before an intergroup meeting, help construct a meeting agenda, monitor the pace of communication between groups during the meeting, or actually referee the interaction. Acting in a more subtle, indirect way, the change agent may schedule the meeting at a neutral site or establish time limits for intergroup interaction.

The whole process can be as short as an afternoon, though it is more likely to last as long as several months of weekly sessions. Through these sessions, group members begin to learn things about one another and their relationships that can help them focus on common interests and begin to overcome conflictive tendencies.

### *Intergroup Team Building*

**Intergroup team building** is a deep intervention that has three primary aims:

- to improve communication and interaction between work-related groups
- to decrease counter-productive competition between the groups
- to replace group-centered perspectives with an orientation that recognizes the necessity for various groups to work together<sup>41</sup>

As indicated in Figure 14.5, during the first step of intergroup team building, two groups (or their leaders) meet with an OD change agent and discuss whether relationships between the groups can be improved. In the second step, if both groups agree that this goal is feasible, the change agent asks both groups to commit themselves to searching for ways to improve their relationship.

The groups then move to the third step of intergroup team building. The two groups meet in separate rooms, and each makes two lists. One list includes the group's perceptions, thoughts, and attitudes toward the other group. The other list describes their thoughts about what the other group is likely to say about them.

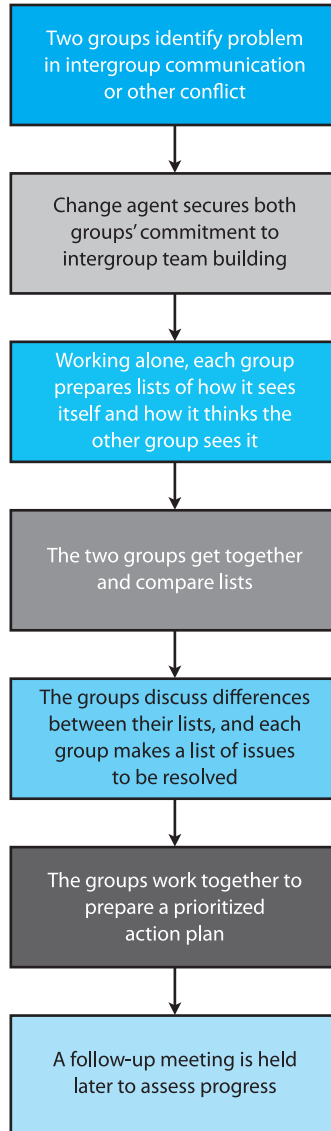


Figure 14.5 Steps in an Intergroup Team-Building Intervention

In the fourth step, the two groups reconvene and compare their lists. Each group can compare its view of the other group with the way the other group expects to be seen. Discrepancies uncovered during this comparison are discussed during the fifth step, when the groups meet separately. Each reacts to what it has learned about itself and the other group and then lists important issues that need to be resolved between the two groups.

During the sixth step, the two groups meet again and compare the lists of issues, setting priorities. They then work together on an action plan to resolve the issues based on their priority. They assign individual responsibilities and target dates for completion.

The final step is a follow-up meeting held later to assess progress made to date. At that time,

additional actions are planned as required to ensure that intergroup cooperation will continue over the long run.

### **Organizational Interventions**

Organizational interventions are intended to deal with structural and cultural problems, such as those identified in Chapters 12 and 13 as well as those mentioned earlier in this chapter.

Some of these interventions are directed at improving communication and coordination within the organization. Others focus on diagnosing and strengthening relations between the organization and its external environment.

#### *Survey Feedback*

The main purpose of **survey feedback** is to stimulate information sharing throughout the entire organization; planning and implementing change are of secondary importance.<sup>42</sup> Thus this technique is a relatively shallow, organization-level intervention.

The survey feedback procedure normally proceeds in four stages. First, under the guidance of a trained change agent, top management engages in preliminary planning, deciding such questions as who should be surveyed and what questions should be asked. Other organization members may also participate in this stage if their expertise or opinions are needed. Second, the change agent and his or her staff administer the survey questionnaire to all organization members. Depending on the kinds of questions to be asked and issues to be probed, the survey questionnaire might include any of the diagnostic questions provided in this book. Third, the change agent categorizes and summarizes the data. After presenting this information to management, he or she holds group meetings to let everyone who responded to the questionnaire know the results. Fourth, the groups that received the feedback information hold meetings to discuss the survey. The group leaders (perhaps a supervisor or an assistant vice president) help groups interpret the data—that is, diagnose the results and identify specific problems, make plans for constructive changes, and prepare to report on the data and proposed changes with groups at the next lower hierarchical level. The change agent usually acts as a process consultant during these discussions to ensure that all group members have an opportunity to contribute their opinions.

Survey feedback differs dramatically from the traditional questionnaire method of gathering information. In survey feedback, not only are data collected from everyone, from the highest to the lowest level of the hierarchy, but everyone in the organization also participates in analyzing the data and in planning appropriate actions. These key characteristics of survey feedback reflect OD's basic values, which stress the criticality of participation as a means of encouraging commitment to the organization's goals and stimulating personal growth and development.

#### *Open System Planning*

**Open system planning** is a fairly deep, organization-level intervention that is distinguished by its focus on the organization as a system open to its surrounding environment. The primary purpose of open system planning is to help the members of an organization devise ways to accomplish their firm's mission in light of the demands and constraints that originate with constituency groups in the organization's environment. As indicated in Chapter 13, these groups may include raw material suppliers, potential employees, customers, government regulators, and competitors.



As shown in Figure 14.6, the intervention involves five steps:

1. *Identification of the core mission or purpose.* The members of the organization meet and, through open discussion, define the firm's basic goals, purpose, and reason for existence.
2. *Identification of important constituency groups.* Participants identify the environmental constituencies that can affect the firm's ability to accomplish its goals and purpose.
3. *"Is" and "ought" planning.* Participants describe current relationships between the organization and its constituencies. They consider each constituency separately, focusing on the importance and duration of the relationship. Other factors probed include the frequency with which the parties come in contact with one another and the organization's ability to sense and react to changes in the constituency group. Participants then determine how satisfactory the relationship *is* to both organization and constituency. If this assessment uncovers deficiencies, participants specify what the relationship *ought* to be if it is to satisfy both sides.
4. *Current responses to constituency groups.* Participants assess the organization's current response to each constituency group by answering these questions: What does this constituency want from us? What are we currently doing to respond to this demand? Is our current response moving us closer to where we want to be in relation to our company's goals and purpose?
5. *Action planning.* If the current situation is not what it ought to be, and if the organization's current response to its constituency groups is inadequate, participants face the final task of deciding how to redirect the firm's behavior. In planning corrective action, they usually consider these questions: What actions should be taken, and who should take them? What resource allocations are necessary? What timetable should be set? When should each action start and finish? Who will prepare a progress report, and when will it

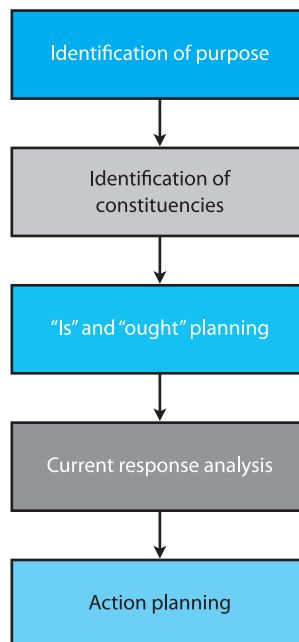


Figure 14.6 Steps in an Open System Planning Intervention

be due? How will actions be evaluated to verify that progress is proceeding in the desired direction?<sup>43</sup>

Unlike most other OD interventions, open system planning directs primary attention to factors *outside* the organization that can influence organizational performance. It is especially useful in providing a structured, yet participatory, way to establish a firm's purpose and set the goals required to accomplish this purpose. Open system planning can also help identify critical environmental contingencies during the process of organization design. This exercise encourages the development of a better fit between an organization's structure and its environment.

## Evaluating Change and Development

No matter what type of organization development intervention is used, the concluding stage of the OD process always consists of an evaluation of the technique's effectiveness. Based on the results of this evaluation, efforts may be devoted to ensuring that the newly developed attitudes, values, and behaviors become permanent fixtures in the organization. Alternatively, OD may begin anew, and additional interventions may be initiated to stimulate further change. Table 14.3 contains a checklist of questions that can prove helpful in deciding which criteria to use and how to measure them when evaluating the effectiveness of organization development.

As suggested by the checklist, resources are expended to acquire the outcomes generated by the OD process. Consequently, OD's effectiveness must be judged partly in terms of its outcomes. In addition, measuring its effectiveness requires remembering why the process was undertaken initially and assessing what took place during each stage of the OD process. This procedure guarantees that an OD effort labeled "effective" not only accomplished its intended purpose, but did so in a manner that left everyone more informed about the process of change and ways to manage it. Finally, the effects of external and internal factors, whether positive or negative, on the OD process must be examined and cataloged for subsequent reference. With this knowledge, the factors that support change can be revisited when needed again in the future, and the ones that are resistant can be anticipated and neutralized.

## Summary

The *culture* of an organization consists of deep-seated norms and values as well as surface expressions of these norms and values. The latter include *ceremonies, rites, rituals, stories, myths, heroes, symbols, and language*. Culture is a cohesive force that influences the way that the firm's members perceive the formal organization, their behaviors, and themselves. *Symbolic management* and *organization development* (OD) interventions can be used to manage the culture of an organization.

*Organization development* is both a field of research and a collection of *interventions* intended to stimulate planned change in organizations. Associated with OD is a concern about managing resistance to change and strengthening forces that favor change. *Force field analysis* is a technique that can be used to aid in the pursuit of these complementary goals. The *action research model* describes how *change agents* often manage the OD process.

OD interventions differ in terms of the types of organizational behavior that are their *targets* and the *depth* of change stimulated. The *role negotiation technique* and *sensitivity training* are interventions of increasing depth that target interpersonal problems. *Process consultation* and *team development* are group interventions of increasing depth. *Third-party*

Table 14.3 Criteria for Evaluating Change Efforts

Criterion	Suggested questions
<i>Overall results:</i>	
Desired outcomes	1. What were the intended outcomes of the intervention? How do they compare with the outcomes actually realized?
Guiding assumptions	2. How explicit were the assumptions that guided the intervention? Did experience prove them to be both valid and appropriate? Did everyone understand and agree with the intervention's purpose as a result?
Theory foundation	3. How consistent with current theories of organization behavior and organization development are these assumptions? Was everything currently known with regard to the intervention's focus and purpose incorporated in the intervention?
<i>Phase of intervention:</i>	
Identification	4. What was the reason for starting the intervention? Who was initially involved? Was the intervention undertaken because of a broadly felt need or a narrow set of special interests?
Consultation	5. What activities were performed at the start of the intervention process? Who was involved in them? Was the intervention implemented prematurely, without adequate diagnosis? Did unnecessary resistance arise as a result?
Data gathering	6. What specific data collection and provisional diagnostic activities took place? Were they carried out fully and effectively?
Feedback and planning	7. What aspects of the organization were diagnosed to determine the target and depth of the intervention that was implemented? How was the intervention planned, and who planned it? How were resources used in this effort? How explicit and detailed were the plans that resulted?
Action	8. What was actually done? When was it done? Who did it? How do the answers to these questions compare with the action plan as initially developed?
Post-action	9. Was post-action evaluation included from the outset as part of the intervention? Were deficiencies identified during evaluation corrected through a careful, planned modification of the intervention or its action plan?
<i>External factors:</i>	
Workforce traits	10. Were the results of the intervention affected, either positively or negatively, by workforce characteristics (such as age, gender, education, or unemployment level)?
Economy	11. What was the state of the economy and the firm's market at the time of the intervention? Did economic factors affect the success of the intervention?
Environment	12. How much did the organization's environment change over the course of the intervention? Are the intended results of the intervention still desirable given the organization's current environment?
<i>Internal factors:</i>	
Size	13. How large is the organization? Did its size permit access to the resources required for the intervention to succeed?
Technology	14. What is the organization's primary product, and what sort of technology is used to make it? Do the results of the intervention mesh or conflict with the requirements of this technology?
Structure	15. How mechanistic or organic is the organization's structure? Do the results of the intervention mesh or conflict with this structure?
Culture	16. What are the organization's prevailing norms and values concerning change? Concerning involvement in organization development interventions?

Sources: Based on N. Tichy and J. N. Nisberg, "When Does Work Restructuring Work? Organizational Innovations at Volvo and GM," *Organizational Dynamics* (1976), 13–36; W. L. French, "A Checklist for Organizing and Implementing an OD Effort," in W. L. French, C. H. Bell, Jr., and R. A. Zawacki, eds., *Organization Development: Theory, Practice, and Research*, rev. ed. (Plano, TX: Business Publications, 1983), pp. 451–459.

*peacemaking* and *intergroup team building* are increasingly deep intergroup interventions. *Survey feedback* and *open system planning* are organization-level interventions of increasing depth. To be considered completely successful, OD efforts should conclude with an evaluation of program effectiveness.

## Review Questions

1. As a manager, you face the task of reversing cultural norms that currently favor low performance. How can you accomplish this task? What role do the surface elements of culture play in your plan?
2. How do cultural norms and values act as social information? What effects does this information have on organizational behavior? Why should managers take social information into account when designing jobs and structuring the organization?
3. Which of the OD interventions described in this chapter would you choose for each of the following situations: a person who understands his or her role in a group but cannot seem to get along with co-workers; a group of people who get along with one another but are less productive than expected; an organization suffering from poor internal communication; an organization unsure about its place in the broader business environment?
4. Why is it always important to evaluate the results of an OD intervention? What kinds of information should you collect and consider during an evaluation?



# Conclusion

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# International Organizational Behavior

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Organizations are growing beyond national borders, in many instances toward multinationalization, in which a home office in one country manages operations in several others, and in some instances toward globalization, where organizational units located in different countries conduct business autonomously. With this growth comes differences in nationality and culture within organizational boundaries that can have significant effects on micro, meso, and macro organizational behavior. These differences can complicate the jobs of contemporary managers because they require that management practices developed in one cultural region be modified for use in others. Managers in these circumstances *must* take international differences seriously if they expect to derive competitive advantage from cultural diversity and succeed in global markets.

This chapter focuses on some of the most important international differences that have been identified in organizational research, examining the effects they can have on the management of organizational behavior. It begins with the introduction of a five-dimensional model that is useful in highlighting differences among national cultures. Next, it discusses effects that the differences mapped by the five dimensions can have on organizations and their members. The chapter concludes by considering the managerial implications of such international differences, focusing on a basic framework for fitting the management practices described in this book—which are primarily North American in origin and cultural focus—to the job of managing people and organizations throughout the world.

## International Dimensions

How do cultures differ from one region of the world to another? In what ways are the **national cultures** of different countries comparable? What effects do cultural differences have on people's attitudes and behaviors in organizations? In a ground-breaking study, Dutch researcher Geert Hofstede set out to answer these questions by surveying employees in IBM offices located in 40 countries throughout the world. As he examined the data from 116,000 questionnaires, Hofstede discovered that most differences among national cultures could be captured by a model composed of four cross-cultural dimensions: *uncertainty avoidance*, *masculinity-femininity*, *individualism-collectivism*, and *power distance*.<sup>1</sup> In later research, Canadian researcher Michael Harris Bond found a fifth dimension, *long-term/short-term orientation*, which Hofstede later added to his model.<sup>2</sup>



### Uncertainty Avoidance

The degree to which people are comfortable with ambiguous situations and with the inability to predict future events with assurance is called **uncertainty avoidance**. At one extreme of this dimension, people with weak uncertainty avoidance feel comfortable even though they are unsure about current activities or future events. Their attitudes are expressed in the following statements:

- Life is inherently uncertain and is most easily dealt with if taken one day at a time.
- It is appropriate to take risks in life.
- Deviation from the norm is not threatening; tolerance of differences is essential.
- Conflict and competition can be managed and used constructively.
- There should be as few rules as possible, and rules that cannot be kept should be changed or eliminated.<sup>3</sup>

At the other extreme, people characterized by strong uncertainty avoidance are most comfortable when they feel a sense of certainty about the present and future. Their attitudes about uncertainty and associated issues can be stated as follows:

- The uncertainty inherent in life is threatening and must be fought continually.
- Having a stable, secure life is important.
- Deviant people and ideas are dangerous and should not be tolerated.
- Conflict and competition can unleash aggression and must be avoided.
- Written rules and regulations are needed; if people do not adhere to them, the problem is human frailty, not defects in the rules and regulations themselves.<sup>4</sup>

In national cultures characterized by high uncertainty avoidance, behavior is motivated at least partly by people's fear of the unknown and by attempts to cope with this fear. Often, people in such cultures try to reduce or avoid uncertainty by establishing extensive formal rules. For instance, having detailed laws about marriage and divorce diminishes uncertainty about the structure and longevity of family relationships. If uncertainty proves unavoidable, people with a cultural aversion to uncertainty may hire "experts" who seem to have the ability to apply knowledge, insight, or skill to the task of transforming something uncertain into something understandable. These experts need not actually accomplish anything, so long as they are perceived as understanding what others do not.

People with an uncertainty aversion may also engage in rituals intended to help them cope with the anxiety aroused by uncertainty. For example, they may develop extensive plans and forecasts designed to encourage speculation about the future and to make it seem more understandable and predictable. Plans and forecasts dispel anxiety, even if they prove largely invalid. For this reason, although people living in highly changeable climates often joke about the inaccuracy of local weather forecasts, many still tune into televised weather forecasts every night to plan what to wear and do the next day.

### Masculinity–Femininity

Hofstede used the term *masculinity* to refer to the degree to which a culture is founded on values that emphasize independence, aggressiveness, dominance, and physical strength. According to Hofstede, people in a national culture characterized by extreme masculinity hold beliefs such as the following:

- Sex roles in society should be clearly differentiated; men are intended to lead and women to follow.
- Independent performance and visible accomplishments are what count in life.
- People live to work.
- Ambition and assertiveness provide the motivation behind behavior.
- People admire the successful achiever.<sup>5</sup>

*Femininity*, according to Hofstede, describes a society's tendency to favor such values as interdependence, compassion, empathy, and emotional openness. People in a national culture oriented toward extreme femininity hold such beliefs as the following:

- Sex roles in society should be fluid and flexible; sexual equality is desirable.
- The quality of life is more important than personal performance and visible accomplishments.
- People work to live.
- Helping others provides the motivation behind behavior.
- People sympathize with the unfortunate victim.<sup>6</sup>

Together, the extremes of masculinity and femininity delineate the dimension of **masculinity–femininity** in Hofstede's analysis of cross-cultural differences. One important effect of the differences mapped by this dimension is the way a nation's work is divided into jobs and distributed among its populace. In masculine national cultures, women are forced to work at lower-level jobs. Managerial work is seen as the province of men, who are portrayed as having the ambition and independence of thought required to succeed at decision making and problem solving. Women also receive less pay and recognition for their work than do their male counterparts. Only in "feminine" occupations such as teacher or nurse or in supporting roles such as secretary or clerk are women allowed to manage themselves. Even then, female supervisors must often imitate their male bosses to gain acceptance as managers.

In contrast, equality between the sexes is the norm in feminine national cultures. Neither men nor women are considered to be better managers, and no particular occupation is seen as masculine or feminine. Both sexes are equally recognized for their work, and neither is required to mimic the behavior of the other for the sake of acceptance in the workplace.

### **Individualism–Collectivism**

According to Hofstede, **individualism–collectivism** is a dimension that traces cultural tendencies to emphasize either satisfying personal needs or looking after the needs of the group. From the viewpoint of individualism, pursuing personal interests is seen as being more important, and succeeding in the pursuit of these interests is critical to both personal and societal well-being. If each person takes care of personal interests, then everyone will be satisfied. Consistent with this perspective, the members of individualistic national cultures espouse the following attitudes:

- "I" is more important than "we." People are identified by their personal traits.
- Success is a personal achievement. People function most productively when working alone.
- People should be free to seek autonomy, pleasure, and security through their own personal efforts.

- Every member of society should take care of his or her personal well-being and the well-being of immediate family members.<sup>7</sup>

In contrast, the collectivist perspective emphasizes that group welfare is more important than personal interests. People who hold this view believe that only by belonging to a group and looking after its interests can they secure their own well-being and that of the broader society. For this reason, the members of collectivistic national cultures tend to ignore personal needs for the sake of their groups, ensuring group welfare even if personal hardships must be endured. They agree on the following points:

- “We” is more important than “I.” People are identified by the characteristics of the groups to which they belong.
- Success is a group achievement. People contribute to group performance, but groups alone function productively.
- People can achieve order and security and fulfill their duty to society only through group membership.
- Every member of society should belong to a group that will secure members’ well-being in exchange for loyalty and attention to group interests.<sup>8</sup>

In national cultures oriented toward the individualistic end of the dimension, membership in a group is something that can be initiated and terminated whenever convenient. A person does not necessarily have a strong feeling of commitment to any of the groups to which he or she belongs. In more collectivistic national cultures, however, changes in membership status can be traumatic. Joining and leaving a group can be likened to finding and then losing one’s sense of identity. The collectivist feels a very strong, enduring sense of commitment to the group.<sup>9</sup>

### **Power Distance**

**Power distance** is a dimension that reflects the degree to which the members of a society accept differences in power and status among themselves. In national cultures that tolerate only a small degree of power distance, norms and values specify that differences in people’s ability to influence others should be minimal; instead, political equality should be encouraged. People in these cultures show a strong preference for participatory decision making and tend to distrust autocratic, hierarchical types of governance. They hold the following beliefs:

- Superiors should consider subordinates “people just like me,” and subordinates should regard superiors in the same way.
- Superiors should be readily accessible to subordinates.
- Using power is neither inherently good nor inherently evil; whether power is good or evil depends on the purposes for, and consequences of, its use.
- Everyone in a society has equal rights, and these rights should be universally enforced.<sup>10</sup>

In contrast, national cultures characterized by a large degree of power distance support norms and values stipulating that power should be distributed hierarchically, instead of being shared more or less equally. People in these cultures favor using authority and direct supervision to coordinate people and jobs. They hold the following beliefs:

- Superiors and subordinates should consider each other to be different kinds of people.

- Superiors should be inaccessible to subordinates.
- Power is a basic fact of society; notions of good and evil are irrelevant.
- Power holders are entitled to special rights and privileges.<sup>11</sup>

Power distance influences attitudes and behaviors by affecting the way that a society is held together. When the members of a national culture favor only a small degree of power distance, citizens have a strong, direct voice in determining national policy. Conversely, authoritarian, autocratic government is the hallmark when societal norms and values favor larger power distance.

### Short-Term/Long-Term Orientation

The dimension of **short-term/long-term orientation** reflects the extent to which the members of a national culture are oriented toward the recent past and the present versus being oriented toward the future. In national cultures characterized by a short-term orientation, individuals believe the following:

- It is important to respect traditions and to remember past accomplishments.
- To forget history is to risk repeating past mistakes.
- Failing activities should be halted immediately.
- Resources should be consumed now without worrying about the future.

Thus the short-term orientation supports immediate consumption and opposes the deferral of pleasure and satisfaction. People tend to avoid unpleasant tasks, even if they are necessary to ensure a pleasurable future.

In contrast, in national cultures with a long-term orientation, people agree on the following points:

- It is important to look ahead and to envision the future.
- History is likely to repeat itself only if looking to the past obscures visions of the future.
- Perseverance in the face of adversity can overcome failure.
- Resources should be saved to ensure a prosperous future.<sup>12</sup>

A longer-term orientation favors the opposite strategy—that is, doing what is necessary now, whether pleasant or unpleasant, for the sake of future well-being. Short-term/long-term orientation thus influences people's willingness to endure hardship in the present and defer pleasurable experiences into the future.

### Effects on Organizational Behavior

The five-dimensional model based on the research by Hofstede and Bond does not lack for critics. For instance, a study that used the original four dimensions to assess the societal values of American, Japanese, and Taiwanese managers in Taiwan revealed problems with measurement validity and reliability (see Chapter 16 for a discussion of these kinds of problems).<sup>13</sup> In addition, other researchers have proposed competing frameworks, such as the cultural dimensions model introduced by Shalom Schwartz and associates, and the GLOBE taxonomy developed by Robert House and colleagues.<sup>14</sup> Nonetheless, the Hofstede–Bond model is considered by many to be the most comprehensive cross-cultural framework currently available, and it can stimulate useful insights into ways in which organizational behavior varies

from one national culture to another. For this reason, it serves as the conceptual foundation of the rest of this chapter.

### Cultural Trends: Four Scenarios

Table 15.1 summarizes the average scores on the five dimensions for each of the 44 countries included in the studies by Hofstede and Bond. In the table, larger numbers signify greater amounts of uncertainty avoidance, masculinity, individualism, power distance, or longer-term orientation. The cultural distinctions quantified in this table reflect a variety of differences in the way people think and behave in different national cultures. To explore some of these differences, try using the five dimensions of the model to explain the following four scenarios:

1. *Feelings about progress.* Being modern and future-oriented is highly valued in China. From the modernist perspective, something that has existed for many years may seem old-fashioned or obsolete. In Russia, however, tradition, the status quo, and the past are more highly revered. To a traditionalist, familiar things are perceived as trustworthy, proven, and worthwhile. Which dimension explains this difference?
2. *Tendencies toward confrontation or consensus.* In Greece, it is important to smooth over differences to preserve agreement. Emphasis is placed on building consensus among co-workers and avoiding personal confrontation. In Denmark, conflict and confrontation are accepted or even encouraged. Conflict is perceived to be a signal of the need for change. How can this difference be explained?
3. *Locus of control.* The national culture of Australia instills a sense of personal responsibility for the outcomes of individual behaviors. Rewarding people for personal performance is considered a logical consequence of the value that Australians place on personal accountability. In Pakistan, however, people focus on external social causes to explain similar outcomes. Giving people rewards for personal performance seems unwarranted because of cultural beliefs that behaviors are strongly influenced by outside forces. How can you explain this difference?
4. *Status and social position.* In India, status is accorded on the basis of family, class, ethnicity, and even accent. High-status people can impose their will on lower-status people, even when both are equally knowledgeable and competent. In New Zealand, status is earned through personal achievement, and shared governance by majority rule or participatory decision making is valued more highly than personal fiat. Expertise outranks social position in determining who will be involved in decision-making procedures. What lies beneath this difference?<sup>15</sup>

Were you able to explain the first scenario? Differing attitudes toward progress are produced by cross-cultural differences in short-term/long-term orientation. Cultures like that of Russia, which incorporate short-term orientations (10 on short-term/long-term orientation, as indicated in Table 15.1), honor tradition and feel threatened by new ways of doing things. Cultures like that of China, which include long-term orientations (118 on short-term/long-term orientation), more readily embrace modern ways.

The second scenario focuses on conflict avoidance, a cultural tendency that is closely associated with uncertainty avoidance. Conflict creates uncertainty, and cultures that cannot deal with uncertainty, like the Greek culture (112 on uncertainty avoidance), prefer to avoid the competition and aggression that conflict unleashes. In contrast, cultures that can tolerate uncertainty, like the Danish culture (23 on uncertainty avoidance), can cope with conflict as well.

Table 15.1 A Comparison of Cultural Characteristics

National culture	Uncertainty avoidance	Masculinity–femininity	Individualism–collectivism	Power distance	Short-term/long-term orientation
Argentina	86	56	46	49	—
Australia	51	61	90	36	—
Austria	70	79	55	11	—
Belgium	94	54	75	65	—
Brazil	76	49	38	69	—
Canada	48	52	80	39	—
Chile	86	28	23	63	—
China	60	50	20	80	118
Colombia	80	64	13	67	—
Denmark	23	16	74	18	—
Finland	59	26	63	33	—
France	86	43	71	68	30
Germany	65	66	67	35	31
Great Britain	35	66	89	35	—
Greece	112	57	35	60	—
Hong Kong	29	57	25	68	96
India	40	56	48	77	—
Indonesia	48	46	14	78	25
Iran	59	43	41	58	—
Ireland	35	68	70	28	—
Israel	81	47	54	13	—
Italy	75	70	76	50	—
Japan	92	95	46	54	80
Mexico	82	69	30	81	—
Netherlands	53	14	80	38	44
New Zealand	49	58	79	22	—
Norway	50	8	69	31	—
Pakistan	70	50	14	55	—
Peru	87	42	16	64	—
Philippines	44	64	32	94	—
Portugal	104	31	27	63	—
Russia	90	40	50	95	10
Singapore	8	48	20	74	—
South Africa	49	63	65	49	—
Spain	86	42	51	57	—
Sweden	29	5	71	31	—
Switzerland	58	70	68	34	—
Taiwan	69	45	17	58	—
Thailand	64	34	20	64	—
Turkey	85	45	37	66	—
United States	46	62	91	40	29
Venezuela	76	73	12	81	—
West Africa	54	46	20	77	16
Yugoslavia	88	21	27	76	—

Source: Based on G. Hofstede, "Motivation, Leadership, and Organization: Do American Theories Apply Abroad?" *Organizational Dynamics* 9 (1980), 42–63; and G. Hofstede, "Cultural Constraints in Management Theories," *Academy of Management Executive* 7 (1993), 81–94.

The third scenario concerns locus of control and arises out of cross-cultural differences based on individualism and collectivism. On the one hand, the sense of personal responsibility stimulated by believing that the locus of control for personal behavior lies inside the individual is consistent with the norms and values of an individualistic national culture like that of Australia (90 on individualism–collectivism). On the other hand, the focus on social causes as the source of behaviors that is prompted by an external locus of control is compatible with the cultural collectivism of countries like Pakistan (14 on individualism–collectivism).

The fourth scenario shows how cultural differences in power distance can affect the way status and social position are accorded and perceived. Cultures like that of India in which status and position are seen as birthrights—the special-privilege approach—also tend to be oriented toward large power distance (77 in Table 15.1). In contrast, cultures in countries like New Zealand in which status and position are awarded according to personal abilities—the equal opportunity approach—are more inclined toward smaller power distance (22 in the table).

### Organizational Effects

The four scenarios illustrate how the Hofstede–Bond five-dimensional model can diagnose differences in national culture and help identify some of the cultural roots of everyday customs and behaviors. To understand how these cultural differences can influence organizational behavior, consider first the national culture of the United States and its effects on American theories and practices. As shown in Table 15.1, the U.S. national culture is extremely individualistic (91) and oriented toward larger degrees of power distance (40) than many of the other cultures included in Hofstede’s study. If attention is limited to these two cultural characteristics—to simplify the discussion—a few brief examples will suffice to show how the U.S. national culture shapes and affects organizational behavior in American firms.

As indicated in Chapter 5, work behaviors in U.S. companies are influenced most strongly by the receipt of rewards expected to satisfy personal needs, especially when those rewards are distributed in proportion to personal performance. Thus American firms often use piece-rate wages or commission payments tied to personal performance to encourage productivity, and these tactics typically succeed in the United States as motivational devices. As suggested by the Hofstede–Bond model, this tendency is consistent with the strong individualism of the U.S. national culture, and of individualistic proclivities to perceive work as something that people accomplish alone and rewards as allocated fairly when received according to personal—not group—achievements.

In addition, as described in Chapter 10, American models of leadership suggest that leading is largely a process of directing the behaviors and strengthening the motivation of individual employees. Individualism requires that leaders in U.S. firms use direct supervision to coordinate the work of their subordinates, so that success at personal jobs in turn leads to fulfillment of group and organizational goals. The leader is the “glue” that keeps groups of co-workers from falling apart. Large power distance justifies the leader’s use of the power necessary to accomplish this feat.

Finally, American organizations often reflect the tenet that large firms should be structured as hierarchies in which rules and procedures govern employee behaviors, in the manner indicated in Chapter 12. The type of direct supervision undertaken as part of the task of being a leader is implemented when rules and procedures fail to provide the necessary guidance. This kind of hierarchical structuring requires workers to agree with the belief that differences in power are a normal part of everyday life. It is made possible by the fact that the U.S. national culture favors norms supportive of a relatively large degree of power distance.

## Cross-Cultural Differences

To further understand how the differences highlighted in the Hofstede–Bond model can influence behavior in organizations, consider the various areas of organizational behavior as practiced in organizations throughout the world.

### Decision Making

On an Israeli **kibbutz**—a self-contained community, often located along Israel’s national border and organized around deeply held religious principles—decision making is shared among the adult membership, being vested in the kibbutz’s general assembly rather than in the hands of a small management group. The general assembly, which is the principal governing body of the kibbutz, meets once per week in most kibbutzim. Topics considered in assembly meetings may include the purchase, cleaning, and repair of kibbutz clothing, as all clothing is collectively owned, or the practices used to raise and educate kibbutz children, as children are raised in communal quarters. Participation in assembly meetings is nearly universal, because all members who are kibbutz-born and age 19 or older or who have completed a one-year naturalization program can vote on the issues.

The secretariat, an administrative board consisting of elected officials, is empowered only to implement policies approved by the kibbutz assembly. No official is permitted to act outside assembly mandates. Each is elected by the assembly, serves a fixed term of office, and cannot hold the same office for more than one consecutive term. As a result, the ability of any office holder to amass the power needed to make decisions autonomously is strictly limited.<sup>16</sup>

In a similar vein, Japanese organizations are well known for their use of *ringisei*, a consensus-based process of decision making in which managers circulate proposals among subordinates to gain their approval before implementing decisions. Such a scheme increases commitment, reduces resistance to change, and can minimize the time required to implement the results of decision-making processes. However, the decision-making process itself can consume a considerable amount of time.<sup>17</sup>

In contrast to the Israeli and Japanese approaches, Korean businesses seldom use groups to make decisions. Instead, members of the families that own Korea’s *chaebol* conglomerates make all corporate decisions themselves and require subordinates to implement them without question. Although Korean firms sometimes employ an approach that outwardly resembles Japanese consensus decision making, it is actually a process of communicating management decisions already made, because employees are not allowed to suggest significant changes.<sup>18</sup>

In sum, Israeli kibbutz, Japanese, and Korean organizations differ in terms of the extent to which members can influence decisions and decision-making processes. This difference is explained by the contrasting levels of power distance evident in the national cultures of Israel (13), Japan (54), and Korea (Korean power distance was not measured in the Hofstede and Bond studies, but is similar in level to that of Hong Kong [68] and Singapore [74]). Lower power distance, which minimizes hierarchical differences, encourages decentralized decision making among an organization’s membership. Higher power distance, which encourages hierarchical differentiation, also favors the retention of decision making at the top of the organization.

### Motivation

Japanese motives and motivation are influenced by the relatively strong collectivism that characterizes Japan’s national culture (46 in Table 15.1). For the current managers



of large Japanese corporations, managing motivation is primarily a matter of stimulating in each employee a sense of loyalty, obligation, and dependence on superiors and co-workers.

The resulting feelings reinforce the collectivism that holds Japanese organizations together. In particular, the practice in larger Japanese firms of offering lifetime employment (to age 56) to their permanent employees greatly encourages workers to display loyalty to the company. Japanese employees find it difficult to behave disloyally toward a firm that is willing to commit itself to them up to their retirement.<sup>19</sup>

Collectivistic loyalty is also encouraged in large Japanese firms by the *nenko system* of wage payment. Under the *nenko* system, the employee's pay consists of a basic wage plus merit supplements and job-level allowances. The basic wage, which constitutes about 55 percent of total pay, includes the employee's starting wage plus yearly increases. Those increases are determined by (in order of importance) seniority or length of service with the company, age, and supervisory ratings on such qualities as seriousness, attendance, performance, and cooperativeness.<sup>20</sup>

Merit supplements account for an additional 15 percent of the employee's pay and are based on supervisory assessments of specific job behaviors. In principle, they are meant to reward exemplary performance. In fact, merit supplements are heavily influenced by seniority because they are calculated as a percentage of the basic wage. Moreover, junior employees' performance is typically rated below senior employees' work regardless of any real differences between the two.<sup>21</sup> Clearly, Japanese merit supplements reward loyalty and longevity with the company.

Job-level allowances, which account for about 30 percent of each Japanese worker's total pay, reflect the importance of each worker's job in relation to the other jobs in the organization. Such allowances may sound similar to the pay increments that result in the United States from job-evaluation procedures. In Japan, however, each employee's position in the hierarchy of jobs—which affects his or her job-level allowance—is more directly influenced by seniority than by skill.<sup>22</sup>

Thus seniority is the single most important factor in determining a Japanese worker's compensation. It affects the basic wage, merit supplements, and job-level allowances. The large Japanese firm resembles an idealized family in the sense that its employees spend their lives in a stable social setting and receive positions of increasing social importance as they grow older.<sup>23</sup> Along with the *nenko* method of financial compensation, this family-like system provides its members with social rewards for emphasizing loyalty to the company over all other concerns. Employees' decisions to attend work and to perform productively grow out of their sense of loyalty and obligation to the collectivistic firm.

### Work Design

Jobs in the Swedish automotive industry are organized not around the assembly-line processes commonly found in the United States, Japan, and elsewhere, but instead according to the principles of reflective production. Embodied in these principles are the following ideas:

1. Assembly work must be viewed in a wide context on the shop floor. It includes not only the assembly itself, but also the preceding phases (that is, controlling the materials, structuring the materials and tools) and the subsequent phases (that is, final inspection and, if necessary, adjustment and further inspection). The vertical division of labor is also affected in that assembly workers assume responsibility for certain administrative tasks. This new concept of assembly work calls for workers' own reflections.

2. In reflective production, the assembly work itself becomes intellectualized and therefore meaningful. Work teams are able to rebalance their own work.
3. Established empirical knowledge of grouping and restructuring work tasks is a basic precondition for the realization of efficient and humane production systems.<sup>24</sup>

Thus, from the perspective of reflective production, employees are encouraged to develop an understanding of the entire manufacturing process and contribute to its design. Reflected are values of work as an intellectual and humane activity; these values are consistent with the extremely high femininity (5 in Table 15.1) demonstrated by the Swedish national culture.

### Leadership

Consistent with cultural proclivities favoring low power distance (31 in Table 15.1), managers in Sweden often do not supervise employees directly, nor do they always issue direct orders to coordinate work activities. Instead, they function as boundary spanners who facilitate the flow of work between groups, while allowing employees to handle intragroup coordination responsibilities themselves. Managers also resolve conflicts within groups and help members communicate with one another in the course of participatory decision making. Thus managers act more as facilitators or social catalysts than as direct supervisors.

As shown in Figure 15.1, groups and committees fulfill leadership functions in many Swedish firms.<sup>25</sup> The **works council**, for example, is composed of worker representatives who are elected by their peers and management representatives who are appointed by top management. An organization usually has only one works council, which assumes responsibility for developing the overall organizational policies and procedures. Works councils have little or no direct decision-making power, but they provide a forum in which worker representatives can express their opinions and thereby be instrumental in shaping the mission and strategic direction of the firm. They are usually supported by several general advisory committees located lower in the organization hierarchy, which also provide leadership. These advisory groups may include suggestion committees, personnel policy committees, or information committees. Their purpose is to contribute advice on general problems or issues lying outside the domains of the special-interest committees (described next).

**Special-interest committees**, which are also composed of worker and manager representatives, provide the works council with advice on specific issues, such as job design, plant sanitation, personnel practices, and environmental safety. These committees cooperate with middle management to produce yearly reports that assist works councils with the task of formulating company policies. Such reports might include an analysis of water and air pollution produced by the company, a set of guidelines for curbing absenteeism, or a proposal

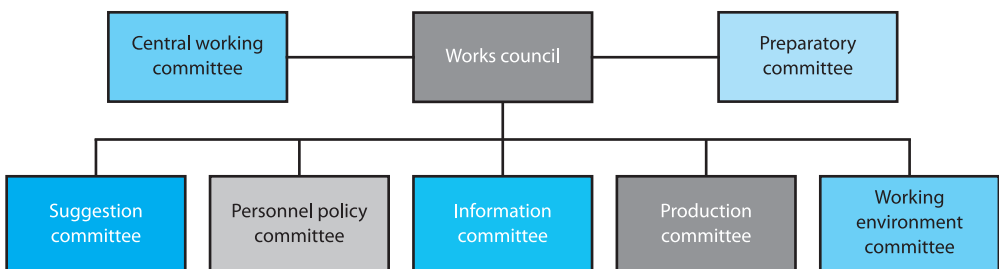


Figure 15.1 The Structure of Advisory Committees in a Scandinavian Firm

on ways to reduce the amount of costly inventory kept on hand. As a whole, then, leadership in Swedish organizations often comes from groups in which employees and management work together to influence company policies and procedures.

### Organization Structure

The structures of family businesses in China reflect the ideology of patrimonialism, which brings together the elements of paternalism, hierarchy, mutual obligation, responsibility, and familism that grow out of the Chinese national culture's high collectivism (20) and power distance (80). Chinese family businesses are typically small in size and take on simple structures that limit them to only a single business function, such as production, sales, or logistics. All employees are expected to help execute this function, resulting in a negligible division of labor. Formalized rules and systems of roles are largely lacking or completely absent. Correspondingly, interpersonal relationships and feelings take priority over concerns with organizational efficiency and effectiveness in determining whether structural arrangements are considered appropriate. Informal groups and personal loyalty replace standardized coordination and formal structuring in such organizations.<sup>26</sup>

Showing the effects of a similar pattern (albeit lesser absolute amounts) of collectivism (46) and power distance (54), the structures of most large Japanese corporations resemble the hierarchical, pyramidal structures of many U.S. companies. In fact, Japanese organization charts often show the same hierarchy of vertical relationships that characterize a U.S. firm's organization chart. In Japanese firms, however, these vertical relationships are often patterned after the parent-child (*oyabun-kobun*) relationships of traditional Japanese families. In the organizational version of this relationship, a subordinate is encouraged to feel loyal and obligated to his or her superior as well as dependent on the superior. This feeling of dependence, in turn, encourages—in fact, requires—acquiescence to the superior's demands.<sup>27</sup>

Another significant feature of Japanese organizational structures relates to communication patterns. In traditionally structured organizations elsewhere in the world, the vertical lines of command that appear in organization charts are meant to serve as the primary formal channels of communication. To communicate with a colleague in another department or division, an employee is expected to pass a message up the hierarchy to a superior, who then sends it downward to the final recipient. In Japanese corporations, however, certain formally designated *horizontal* relationships are accorded the same degree of importance as the vertical relationships depicted in the organization chart. These horizontal relationships, which allow communication to flow across the hierarchy rather than having to go up and down, connect managers who entered the company at the same time. They are encouraged by the group socialization that managers receive on first entering the company—other members of the manager's group become lifetime contacts throughout the company. In addition, such relationships are encouraged by the practice of rotating Japanese managers among the different functional areas of the firm—marketing, accounting, production, finance, and so forth. As a result, each manager becomes more of a generalist than a specialist and can cultivate a collection of horizontal linkages that unites him or her with management peers across functional boundaries.<sup>28</sup>

Together, the kinds of dependence relations and communication patterns formed in Japanese organizations create a **latticework structure** of vertical and horizontal relationships among the company's managers. Continuing relations among management peers from different functional areas, such as marketing and manufacturing, help stimulate harmony and coordination between functional groups. Nonetheless, in large Japanese firms, decision-making authority remains highly centralized. This combination of central control

and strong relationships among peers is unique to the latticework structure of large Japanese corporations.

### *Organizational Change*

In general, national cultures that are highly supportive of organizational change tend to have low power distance, high individualism, and low uncertainty avoidance.<sup>29</sup> Consequently, one would expect cultural resistance to organizational change to be quite high in Russia (with measures of 95, 50, and 90 for power distance, individualism–collectivism, and uncertainty avoidance, respectively)—a supposition that has been borne out by recent experience.<sup>30</sup>

Interestingly, however, in Korea, Japan, and Taiwan (three other countries with cultural profiles similar to that of Russia), innovation and change are relatively common. This apparent paradox can be explained by the pronounced long-term orientation in such cultures (80 for Japan), which strongly emphasizes persistence and adaptive growth in the face of challenge and adversity.<sup>31</sup>

## **Managing International Differences**

Diagnosing and understanding the primary features of national cultures—as in the previous examples—are critical to success in the management of international organizational behavior, because this exercise represents the first step toward determining whether familiar management practices must be reconfigured before being used abroad. A glance back at Table 15.1 indicates that the national cultures of the United States and Canada, for example, are approximately equal in terms of power distance, uncertainty avoidance, masculinity, and individualism. Owing to this similarity, U.S. managers can expect to succeed in Canada, and Canadian managers can anticipate working effectively in the United States, without making major adjustments to customary management practices.

According to Hofstede's findings, however, the level of uncertainty avoidance in Denmark (23) is about half that in the United States (46) and Canada (48). As a result, North American managers will likely find it necessary to change their normal way of doing things if they must work in Denmark. More generally, managers working in national cultures characterized by weaker uncertainty avoidance must learn to cope with higher levels of anxiety and stress, while reducing their reliance on planning, rule making, and other familiar ways of absorbing uncertainty. On the other side of the coin, managers working in cultures with stronger uncertainty avoidance must learn not only to accept, but also to participate in, the development of seemingly unnecessary rules and apparently meaningless planning to help other organization members cope with stressful uncertainty. Rituals that at first glance might seem useless or even irrational may, in fact, serve the very important function of diminishing an otherwise intolerable level of uncertainty.

Next, consider the dimension of masculinity–femininity. Female managers working in cultures characterized by more cultural masculinity than in their own culture face the prospect of receiving less respect at work than they feel they deserve. To cope with gender discrimination of this sort, a female manager may want to seek out male mentors in senior management to secure her place in the organization. Conversely, male managers in national cultures marked by more cultural femininity than their own must control their aggressive tendencies and learn to treat members of both sexes with equal dignity and respect. Acting as mentors, female managers can demonstrate that women are as adept at their jobs as men.

The next dimension to be examined is individualism–collectivism. Managers who must work in national cultures that are more individualistic than their own must first learn to cope

with the sense of rootlessness that comes from the absence of close-knit group relationships. They must learn not to be embarrassed by personal compliments, despite their belief that success stems from group effort. At work, they must develop an understanding of the importance of rewarding individuals equitably and adjust to the idea that organizational membership is impermanent. Conversely, managers attempting to work in cultures that are more collectivistic than their own must adjust to demands for self-sacrifice in support of group well-being. They must also learn to accept equal sharing in lieu of equity and exchange at work. Consequently, they must refrain from paying individual employees compliments and instead praise group performance. In addition, managers adjusting to collectivistic national cultures must understand that belonging to an organization in such cultures means more than just forming a temporary association; it is an important basis of each employee's personal identity.

Managers who work in cultures that favor less power distance may initially feel discomfort stemming from the unfamiliar decentralization of authority and a perceived loss of control. They must learn to be less autocratic and more participatory in their work with others. On the other hand, managers facing cultural tendencies toward more power distance must accept the role that centralization and tall hierarchies play in maintaining what is deemed to be an acceptable level of control. They must adopt a more authoritarian, autocratic style of management. Indeed, they may find that subordinates, if asked to participate in decision making, will refuse on the grounds that decision making is management's rightful job.

Finally, short-term/long-term orientation may have its greatest effect during the planning activities that represent an integral part of management. For managers who are most familiar with a short-term orientation, working in a culture characterized by a long-term orientation will require them to pay less attention to past successes or failures and more attention to future possibilities as they set organizational objectives and define group and individual goals. In contrast, managers from cultures with long-term orientations must accept that colleagues with short-term orientations will spend considerable energy looking backward in time to decide how to approach the future. Traditional approaches will likely be favored over innovation and creativity, and much attention may be paid to avoiding the mistakes of history.

Although the cross-cultural differences just described are readily evident among contemporary national cultures, some have suggested that management practices throughout the world are growing more alike.<sup>32</sup> Consistent with this idea, practices developed in one culture are occasionally borrowed for use in another. For instance, in the United States, teams of co-workers are being formed where employees once worked as individuals, in interventions patterned after Scandinavian work design programs. Quality circles resembling the Japanese groups have become so prevalent that they are now considered part of the U.S. approach to job design. In addition, U.S. business organization structures are becoming flatter and more participatory as downsizing reduces the size of management staffs and as reengineering breaks down barriers separating tasks and task groups. All of these changes are occurring as U.S. companies strive to become more flexible and market-oriented.

Such trends seem to support the **convergence hypothesis**, which suggests that national cultures, organizations, and management practices throughout the world are becoming more homogeneous.<sup>33</sup> In a review of studies that examined this hypothesis, John Child found both evidence for convergence and evidence for divergence (that is, continued cross-cultural differences). Interestingly, studies that supported convergence typically focused on organizational variables, such as structure and technology, whereas studies that revealed divergence usually dealt with employee attitudes, beliefs, and behaviors.<sup>34</sup> Child concluded that organizations themselves may be becoming more alike throughout the world, but that people in these

organizations are maintaining their cultural distinctiveness. Management in a multicultural world currently requires an understanding of cultural differences and will continue to do so for quite some time.

In closing, the five dimensions introduced in this chapter form a model that highlights important differences among national cultures. As you use this model in the future, remember that each dimension simplifies the kinds of variations that exist among the world's national cultures. Such simplification is the necessary consequence of the goal of researchers like Hofstede and Bond, who seek to create theories and models that can be readily understood and used in many situations.<sup>35</sup> Realize also that this simplification encourages stereotyping—that is, the perception that all members of a particular culture are alike in some specific way. Always keep in mind the fact that beneath societal similarities like those discussed in this chapter lie subtle differences among people, who also vary along the lines identified in the Hofstede–Bond model. For example, although both the U.S. and the Canadian national cultures are highly individualistic, a significant number of people in North America are collectivists.<sup>36</sup> For this reason, you should exercise caution when employing the five-dimensional model, lest you overlook relatively less conspicuous, but nonetheless influential, cultural complexities and dissimilarities.

## Summary

Whether comparisons are made within a single *national culture* or across different national cultures, no two organizations are exactly alike. Likewise, no two people in the world hold exactly the same beliefs and values. Thus the discussions in this chapter necessarily involved generalization. Not every Japanese organization has a fully developed *latticework structure*, and not every kibbutz is completely collectivistic. Nevertheless, firms in a particular national culture tend to be more like each other than they are like organizations in other national cultures. Moreover, people in the same national culture tend to think and act more similarly than do people from different cultures.

Cross-cultural differences exist and can have significant effects on organizational behavior. The most important of these cross-cultural differences are captured by five dimensions: *uncertainty avoidance*, *masculinity–femininity*, *individualism–collectivism*, *power distance*, and *short-term/long-term orientation*. Differences in individualism–collectivism and power distance seem to explain many of the differences that can be detected among management practices throughout the world. Considered together, these five dimensions are helpful in understanding why people in a particular national culture behave as they do and can prove useful to managers as they strive to adapt familiar management practices for use in unfamiliar cultures.

## Review Questions

1. Compared with the national culture of Sweden, what level of uncertainty avoidance characterizes the national culture of the United States? In which country would you expect to find greater evidence of ritualistic behavior? Why? How would your answers to these questions change if you were asked to compare the United States and Greece?
2. Hofstede's findings indicated that the U.S. national culture at the time of his research was more masculine than many of the other national cultures he examined. In your opinion, is the U.S. culture still as masculine as Hofstede's research suggests? Why or why not?
3. According to Hofstede's research, the three most individualistic national cultures are found in the United States, Australia, and Great Britain. Can you think of a reason why

these three countries share this cultural characteristic? Does your answer also explain the relatively strong individualism of the Canadian national culture?

4. Would you expect the structures of organizations in Denmark to be taller or flatter than those of organizations in the United States? Why? How are organization structures in Mexico likely to compare with those in Denmark and the United States?

# Evidence Based Management: Critical Thinking and Continuous Learning

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The book *Good to Great* by Jim Collins was one of the best-selling management books of all time. It sold over 3 million copies, topped the *Business Week* best-seller list for years, and was translated into 35 different languages. The book chronicled the success of 11 different companies and distilled five principles that they all shared. The book implied that readers who adopted these principles in their own organization would see similar levels of sustained success over time. The book was well written, supplied a simple formula for success, and gave hope to many managers who were struggling with the complexity of leading large-scale organizations. The only problem with the book was that the advice it offered turned out to be wrong.

As Bruce Niendorf and Kristine Beck showed in 2008, the problem with this book (which was not subject to any type of peer review) was that it engaged in data mining and confused correlation with causality. That is, the book started with 11 companies that the author felt had performed well historically, and looked at all sorts of data to uncover practices or processes that many of them had in common. Because of the small number of companies, and the fact that the measure of success was taken at the same time as the measures of practices and processes, the results confused sampling error and momentary fluctuations with reliable and predictive differences, as well as cause and effect.

For example, if you were to stand at a roulette wheel for a short time, you would eventually see a group of winners and a group of losers. You could study what the winners did to “learn” the secret of their success, but the true validity of the practices can only be tested by then examining them *in the future* to see if their success is repeated. Since a roulette wheel is by definition random, these “winners” will not be able to systematically win in the future, and their “secrets to success” will be uncovered as fraudulent superstitions. Niendorf and Beck did exactly this with the 11 firms identified as “Great” by Jim Collins and they showed that, when one followed these 11 companies into the future, none of them were truly great. In fact, relative to all the Fortune 500 firms few of them were even in the top 200.<sup>1</sup>

Chris Argyris, one of the leading academic management scholars for the last three decades, noted that, “when I was growing up, managers used to say they hired a hand, and they really meant it. But today they say they hire minds. In a world where minds are hired, learning becomes essential.”<sup>2</sup> According to Argyris, certain features of organizational contexts often make it difficult for people to learn what works and what doesn’t. Learning often comes out of an error detection and correction process and, in many organizational contexts, admitting to having made an error can get one in trouble, and suggesting that one’s supervisor has made an error can result in even more trouble.

Thus, there is a great deal of motivation in these contexts to deny that any error has taken place and, ironically, the smarter one is, the better he or she often is at “spinning” the



evidence in order to deny the error. Although this type of spinning may have some short-term personal value in terms of promoting one's career, the organization may lose out on an opportunity to prevent that same error from happening somewhere else. In fact, the organization may be able to learn from this one mistake and put policies in place that might ensure that it will never happen again, but of course this hinges on one's willingness to point out the error in the first place.

Firms that systematically try to avoid this trap are called "learning organizations," and two primary features of learning organizations set them apart from their competitors. First, such firms critically analyze their experiences and the experiences of others to maximize their capacity to learn from past successes and failures.<sup>3</sup> For example, Boeing's "Project Homework" was a three-year study that compared the development process for the lackluster 737 and 747 plane programs with the development process associated with the 707 and 727 programs, which had produced the company's two most profitable planes. The group studying these processes generated a list of more than 100 "lessons learned," which were subsequently transferred to the start-up operations for the 757 and 767 planes. Guided by critically analyzed past experience, these launches proved to be the most error-free and successful in Boeing history. The same process was later used to learn from mistakes that caused the 787 Dreamliner project to be delayed in 2008.<sup>4</sup>

The second primary feature of learning organizations relates to their penchant for experimentation and their use of evidence based management to guide decisions. Evidence based management employs the scientific method to inform organizational practices. As management scholar Jeffrey Pfeffer has noted, "Evidence-based management is a way of thinking and being open to learning, as opposed to assuming that we already know, which is the ideological view supported by casual benchmarking."<sup>5</sup> For example, at Allegheny Ludlum, a specialty steelmaker, it is expected that every manager will launch at least one experimental program each year. The result of its forward-looking philosophy has been a history of productivity improvements averaging close to 8 percent per year.

Although many readers of this book will be business majors, one fact that should not be overlooked is that many of the most successful CEOs do not hold MBAs. General Electric's Jack Welch and Intel's Andy Grove, for example, were formally trained in the "hard" sciences. Although the specialized skills learned in an MBA program are useful for gaining entry-level positions, managers who rise to the top of the organization are often those who generate, test, and implement new ideas and discoveries.<sup>6</sup> Indeed, some have begun to question whether the convergent thinking skills associated with a traditional MBA degree are the most relevant in a changing world, and many employers now look in non-business programs for successful leaders.<sup>7</sup>

Organizations that employ evidence based management rely on critical thinking and rigorously analyzed data to gain a long-term sustainable competitive edge relative to other members of their industry.<sup>8</sup> Unfortunately, knowledge-creating organizations remain the exceptions, not the rule. Too many U.S. businesses fall prey to every new management fad promising a painless solution, especially when it is presented in a neat, bright package. Indeed, this tendency has created a veritable cottage industry of non-peer-reviewed, "pop" management books, which rarely reflect serious thinking about the best way to manage in specific companies. Indeed, as one commentator on these books has noted, "No advice is too lame to get a polite, respectful hearing from a business audience."<sup>9</sup> The vague, "one-best-way" recommendations in these books can rarely withstand rigorous scientific scrutiny.<sup>10</sup>

To avoid this "quick-fix" mentality, managers need to take several steps. First, they must keep current with the literature in the field of management and pay particular attention to peer-reviewed journal articles that translate research findings into practical guidelines.

Second, managers must be skeptical when simple solutions are offered and analyze such solutions (and their supposed evidence) thoroughly. Third, they must ensure that the concepts they apply are based on science rather than advocacy, and they should experiment with new solutions themselves whenever possible. In other words, managers need to transform their companies into learning organizations and turn themselves into lifelong learners.

The purpose of this chapter is to help promote the kind of philosophy embodied by evidence based management. Whereas previous chapters have focused on *content* and learning what is already known about management, this chapter emphasizes the thinking *process*, which will enable you to learn new and innovative approaches to management that will stand the test of time. Being the first to discover and implement innovative management techniques may give your company a sustainable competitive advantage relative to your rivals who are relying on ineffective and widely copied business fads.

The chapter begins by examining the nature of the scientific process, showing you how to successfully conduct your own experiments. It then discusses ways to draw valid causal inferences; this exercise will allow you to maximize your ability to learn from your own experiences and critically evaluate the claims made by others. Next, the chapter considers how to generalize research results to determine whether the results found in one sample and setting are likely to be repeatable in a different sample and setting. Finally, it describes some of the scientific sources to which you can turn when seeking answers to your managerial questions.

## Critical Thinking and the Scientific Process

### Ways of Knowing

To form a learning organization, all employees—but especially managers—must become more disciplined in their thinking and pay more attention to detail. They must continually ask, “How do we know that’s true?” and push beyond the symptom level to discover underlying causes of problems. How do we come to know things? For example, when we say that our solar system contains nine planets, how do we know that this statement is true? When we state that providing workers with specific and difficult goals will lead them to perform better than simply telling them to do their best, how do we know that this assertion is true? And when we note that an effective organization’s structure must match its technology and its environment, how do we know that this claim is true?

Philosophers of science have explored many ways of arriving at knowledge.<sup>11</sup> The most common source of knowledge for most of us is *personal experience*. Most people tend to believe information they acquire by interacting with other people and the world at large and to conclude that their experience reflects truth. Our own personal experiences may not always be a reliable source of truth, however, for several reasons. First, different people may have different experiences that point to different truths. Second, as we saw in Chapter 4, people’s perceptions and memories of their experiences are often biased, inaccurate, or distorted over time. Finally, even if we disregard inaccuracies of perception or memory, the fact remains that any one person can experience only a tiny fraction of all possible situations, and thus the knowledge acquired by personal experience will necessarily be extremely limited.

Despite these shortcomings, a reflective and critical approach to one’s past experience can lead to enhanced understanding. This case is especially relevant for “productive failures” that, when critically analyzed, lead to insight, understanding, and ultimately future success. For example, IBM’s 360 computer series, one of the most popular and profitable lines ever built, was based on the technology of the failed Stretch computer that preceded it.<sup>12</sup> Productive

failures can be even more important to an organization's long-term viability than "unproductive successes," where something goes well but no one understands why.

Earlier, we noted that many managers tend to seek quick-fix remedies to their problems. Sustainable competitive advantage does not come from simple solutions to complex problems. Instead, managers need a method for helping them generate and test new methods of competing. Although critically examined personal experience can be a source of knowledge, several problems and pitfalls arise from simply using personal experience as a means of discerning what is true. In fact, the limits of personal experience in this regard led to the development of the **scientific method**. As Charles Sanders Peirce has stated, "To satisfy our doubts . . . it is necessary that a method should be found by which our beliefs may be determined by nothing human, but by some external permanency. . . . The method must be such that the ultimate conclusion of every man shall be the same. Such is the method of science."<sup>13</sup>

**Objectivity**, or the degree to which scientific findings are independent of any one person's opinion about them, represents the major difference between the scientific approach to knowledge and the other approaches described so far. For example, as the recent scandals made clear, many who conducted so-called research for Wall Street companies were anything but objective in conducting their analyses. Conflict of interest came about because the analysts in the research arm of the companies were pressured by those in the investment banking arm of the companies to rate certain firms as good investments despite the problems the researchers uncovered. As one analyst noted, "It's hard enough to be right about stocks, even harder to build customer relationships when all your companies blow up, you knew they were going to, and you couldn't say anything."<sup>14</sup>

Science as an enterprise is *public*, in the sense that the methods and results obtained by one scientist are shared with others. It is *self-correcting*, in the sense that erroneous findings can be isolated through the replication of one scientist's work by another scientist. In today's competitive and fast-paced environment, however, the manner in which many scientists go public has in some respects changed, and this has impacted the self-correcting nature of applied research. For example, traditionally scientists who came upon an important discovery would write up their research for peer review in a professional journal, where it would be carefully vetted and edited to ensure accuracy—a process that could take up to two years. The process was slow but sure in the sense that irresponsible or erroneous claims were kept out of the public's attention. For example, recently there was a controversy about whether or not the herbal remedy Echinacea was able to prevent people from catching the common cold. Two different studies came to the exact opposite conclusions. Because the methods employed by each study were fully reported, however, other researchers could identify the precise differences between the two studies. This allowed future researchers to control for these differences and thus clarify when and why Echinacea was effective.<sup>15</sup>

Increasingly, however, researchers are bypassing this process and going straight to an unprofessionally reviewed news release when they think they have made an important discovery. For example, Advanced Cell Technologies, a biotechnology firm, announced in a news release that it had created a human clone embryo. This was a major scientific breakthrough; unfortunately, when other scientists tried to replicate the results it became clear that there were serious flaws in the experiments run by Advanced Cell's scientists, and the claim was essentially bogus. Philip Campbell, editor of *Nature*, the scientific journal where the study should have been submitted first, noted, "It undermines public trust in science if key results are released without peer review."<sup>16</sup>

The public and self-correcting nature of this process when successfully practiced means that the results that are eventually accepted are *cumulative*, in the sense that one scientist's

experiment often builds on another's work. These features of the scientific method make it ideal as a means of generating reliable knowledge, and it is no coincidence that the physical, natural, and social sciences receive so much emphasis in today's colleges and universities. For these reasons, we will explore the nature of the scientific process more closely. We look first at the major goals or purposes of science, and then consider how the scientific method is structured to achieve these objectives.

### The Purposes of Science

The basic goal of science is to help humans understand the world around us. Science defines the understanding it seeks as the ability to describe, explain, predict, and control the subjects of its inquiry. We will examine each of these objectives in turn. The purpose of some research is simply *description*—that is, drawing an accurate picture of a particular phenomenon or event. Chapter 2, for example, presented data from Mintzberg's study of managerial roles. The purpose of Mintzberg's research was to find out what managers actually do on the job on a daily basis. Chapter 3 reviewed research that described the major dimensions of personality. Chapter 7 examined descriptive research that sought to delineate the dimensions best suited to describe the nature of jobs. The development of scientific knowledge usually begins with this kind of descriptive work. The ultimate criterion for evaluating all descriptive research is the fidelity with which it reflects the real world.

For other scientific studies, *predicting*, or stating what will happen in the future, is the primary goal. Prediction requires that we know the relationships between certain conditions and outcomes. For example, Chapter 6 described research that attempted to predict who will leave organizations and who will stay. Chapter 10 reviewed studies of leadership that predicted when decisions would be best made by groups and when they would be best left to individuals. Chapter 14 discussed studies that predicted the effects associated with various kinds of organizational cultures. When we cannot accurately predict what will happen in a given situation, we have generally failed to understand it. Thus, in the example that opened this chapter, when the principles that were outlined in the book *Good to Great* failed to predict future performance, people concluded that the content of the book was not accurate and, hence, did not help us “know” why some firms are great.

Studies that focus on prediction often lead to further research in which the goal is to *control* the situation. Predictive studies often uncover relationships between causes and effects. If one can manipulate the causes, it may be possible to effect some outcome in a desirable manner. Chapter 5, for example, reviewed studies indicating that manipulation of pay practices may allow firms to change how hard individuals work. Chapter 8 discussed research that shows how group performance can be controlled by manipulating patterns of communication. In Chapter 13, changing the characteristics of organizational design was shown to be able to improve the fit between the firm and its environment. It is in the area of control that the interests of scientists and management practitioners most clearly converge.<sup>17</sup>

As we have seen throughout this book, managers are responsible for controlling the behaviors of others in organizations. Thus the more information a study provides on ways to achieve this control, the more useful it is to practicing managers. Indeed, research guided by the other objectives is often perceived by managers as merely academic and not worthwhile. In reality, studies dealing with control often represent the by-products of earlier descriptive or predictive studies. Without good descriptive and predictive research, we would probably do little successful research aimed at control.

The ultimate goal of science is *explanation*—stating why some relationship exists. Some might argue that, as long as we can describe, predict, and control things, why go any further?

For example, if managers in the insurance business know that people with college degrees sell more life insurance than do people with high school degrees, why find out anything else? Why not just hire college graduates for all sales positions? If researchers can uncover the reason for college graduates' greater success, however, managers might be able to bring about the desired outcome (selling more insurance) in a more efficient or cost-effective way.

For example, suppose that college-educated salespeople outperform their counterparts who lack higher education, not because they have more years of study per se but because on average they are more self-confident. This self-confidence increases persistence on sales calls, which leads to higher sales volume. If this explanation holds true, a manager might be able to hire high school graduates and then train them to become more self-confident and persistent. As suggested by this example, if we know the exact reason why something occurs, we can usually explain and control it much more efficiently.

### The Interplay of Theory and Data

Having discussed the different ways of arriving at knowledge and the goals, or purposes, of scientific inquiry, we must now consider precisely what the scientific method entails. Figure 16.1 represents a conception of scientific inquiry, depicting science as a continuous process that links theory, which resides in the world of abstract ideas, with data, which reside in the world of concrete facts. A theory is translated into real-world terms by the process of creating hypotheses, and real-world data are translated back into the realm of ideas through the process of verification.

Fred Kerlinger, a well-known social scientist, defined a **theory** as “a set of interrelated constructs, definitions, and propositions that presents a systematic view of a phenomenon by specifying relationships among variables.”<sup>18</sup> With an understanding of the purposes of science and this definition of theory, it is easy to see why theory plays such a central role in the scientific process. A good theory, through its constructs and definitions, should clearly describe a part of the real world. Moreover, by specifying relations among variables, a theory facilitates both prediction and control. Finally, a theory's systematic nature allows us to explain the relationships described. The preceding chapters of this book were filled with theories intended to help you understand how to manage the behavior of people in organizations.

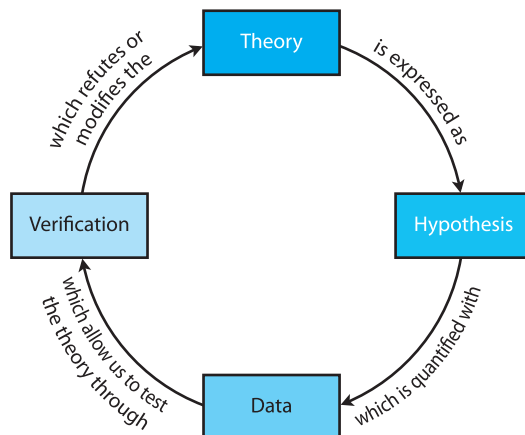


Figure 16.1 The Nature of the Scientific Process

In some cases, theories can be specified with such precision that they become “quantitative models” where one can enter data at one end of the model and then have highly precise predictions about future data come out the other end of the model. For example, at IBM, the company’s scientists are trying to build mathematical models that capture the skills and experience of each consultant. Each person’s experience is coded as a set of quantitative vectors, and then the company’s theories about how to compose teams are converted into mathematical “rules” that allow one to create the optimal team to work on any project, given its requirements.<sup>19</sup>

To have any practical utility, theories must prove themselves in the world of data. Through a process of deduction, researchers generate **hypotheses**, or specific predictions about the relationships between certain conditions in the real world. These hypotheses are related to the theory in the following way: If the theory is correct, then the predictions made by the hypotheses should be found in the real world. Thus, to truly test IBM’s theories about team composition, one would make a prediction that teams formed using the model would out-perform teams that were put together via more traditional methods. Elevating a model and treating it as though it is true, without testing its predictions against future, real-world observations, has to be avoided at all costs. Indeed, many attributed the financial meltdown experienced in 2008 to traders who treated untested mathematical models of various financial entities—especially complex mortgage securities called “collateralized debt obligations”—as if they were true. As one modeler noted, “to confuse the model with the world is to embrace a future disaster in the belief that humans obey mathematical principles.”<sup>20</sup>

Data enter the scientific process at this point. Once hypotheses are formulated, we can collect data and compare the hypothesized results with the actual results. Through the process of **verification**, we then use this comparison to check the accuracy of the theory and to judge the extent to which it holds true. If very little correspondence exists between the hypothesized results and the actual findings, we must reject the theory. At this point, the process begins again with the generation of a new theory. If the projected and actual findings do correspond somewhat, we may need to change the theory in some way so as to be more consistent with the data. If almost complete correspondence exists between the hypothesized results and the actual findings, we may be tempted to claim that the theory is true. Such a conclusion would not be warranted, however, unless we could establish that all other possible explanations for the results have been eliminated. Because this task is almost never achievable, we usually refer to data that correspond closely with a hypothesis as “supporting” rather than “proving” the theory.

Although we have discussed the scientific method in this section as a very deductive, top-down process that begins with theory and ends with data, in many real-world cases of scientific discovery the flow goes the other way. That is, a scientist’s experience with a specific set of data prompts a round of insight and theorizing via a bottom-up inductive process. The key difference, however, between inductive science and data mining is that, in inductive science, the data that are used to generate the theory cannot be used to then verify it.

For example, in the book *Good to Great*, the author could have used the 11 companies that he thought were “great” in the past to build a theory that highlighted key principles of greatness. The key for this to be inductive science, however, would be to apply the principles to a *new set of firms* and then see if the principles derived from the first set of 11 firms based on existing observations *truly predicted future independent observations*. If they did, the theory would have been validated, and any scientists who questioned the validity of the principles could test the theory themselves with their own data. In today’s world, with more and more information collected automatically via technology, the temptation to simply mine the data and draw conclusions is a temptation that has to be avoided.<sup>21</sup>

### Characteristics of Good Theories and Good Data

You do not have to be a scientist to create a theory. Indeed, in our daily lives, we routinely develop informal or **implicit theories** about the world around us. We arrive at these theories through our personal experience and are often unaware of their existence. Many of these implicit theories can be lumped together under the general heading of common sense. Thus, although some real-world managers claim to be skeptical of “theories,” they often fail to realize that they carry around a large number of implicit theories.

In most cases, scientific theories are developed more formally. We will refer to these theories as **explicit theories** to distinguish them from implicit theories. As you have seen, much of this book is intended to persuade managers to replace their implicit theories with explicit theories that have been supported by research. Explicit theories are not always better than implicit theories, however. Moreover, often multiple explicit theories deal with the same subject, and some may be better than others. How do we judge whether a theory is good or bad, or decide which of two competing theories is better?

There are several criteria that are typically employed for judging the worth of theories in organizational behavior.<sup>22</sup> First and foremost, a theory should contribute to the objectives of science. That is, it should be useful in describing, explaining, predicting, or controlling important things. Most theories, whether implicit or explicit, meet this test.

Second, a theory must be logically consistent within itself. Many implicit theories (and some explicit ones) fall short on this criterion. For example, common sense tells us that “Fortune favors the brave.” Conversely, common sense also says that “Fools rush in where angels fear to tread,” which has the opposite implication. Similarly, common sense tells us that “Two heads are better than one” as well as that “Too many cooks spoil the broth.” Clearly, common sense—and many of the implicit theories on which it is based—does not represent good theory because of its self-contradicting nature.

Third, a theory must be consistent with known facts. For example, many people have an implicit theory that men are better leaders than women, but, as we saw in our last chapter, this is inconsistent with known data that show very weak evidence of sex differences in leadership capacity, which, if anything, supports the superiority of women by a small amount. Thus, any theory that assumed or proposed that men are better than women on this dimension would be a bad theory because it is inconsistent with established facts.

A fourth criterion by which to evaluate a theory is its consistency with respect to future events. The theory must not only predict but also make *testable* predictions. A prediction is considered testable if it can be refuted by data. A theory that predicts all possible outcomes actually says nothing. For example, if a theory states that a particular leadership style can increase, decrease, or leave employee performance unchanged, it has offered nothing of value about the relationship between that leadership style and worker performance.

Finally, simplicity is a desirable characteristic of a theory. Highly complex and involved theories are not only more difficult to test, but also more difficult to apply. A theory that uses only a few concepts to predict and explain some outcome is preferable to one that accomplishes the same goal with more concepts. Simplicity is surprisingly difficult to maintain, however. By their very nature, theories oversimplify the real world. Thus, for a theory to be consistent with real-world data, we must inevitably push it toward increasing complexity over time. A good theory can walk the fine line between being too simple (when it will fail to predict events with any accuracy) and being too complex (when it is no longer testable or useful for any purpose).

Having established the scientific method as the interplay between explicit theories and data, and having covered the characteristics of a good theory, we must next discuss the

characteristics of good data. Experienced managers have long known that, “If you can’t measure it, you can’t manage it.” Most data for testing theories are gathered through measurements of the theory’s important concepts. Good data are just as important to scientists as is good theory. Several characteristics render some measures, and therefore the data they generate, better than others.

First, the measures must possess **reliability**; that is, they must be free of random errors. Suppose, for example, that the person who was interviewing you for graduate school was interested in your scholastic aptitude because it predicts success in graduate school. Imagine that, to assess your aptitude, the interviewer handed you two dice and asked you to toss them, suggesting that a high score would mean high aptitude and a low score would indicate low aptitude. At this point, you would probably start wondering about the aptitude of the interviewer. The unreliability of dice as a measure makes them virtually worthless.

Consider the following, less obvious example of a reliability problem. It was once believed that interviewers, after talking to job applicants in an unstructured way for approximately 30 minutes, could provide ratings reflecting the applicants’ suitability for many different jobs. Research showed, however, that these ratings were roughly as reliable as the results of tossing dice.<sup>23</sup> An interviewer would rate the same applicant high one day and low another day or two different interviewers would rate the same applicant very differently. As a consequence, in making important decisions like admitting an applicant to graduate school, most institutions rely heavily on scores on tests such as the Graduate Record Exam (GRE), the Graduate Management Admissions Test (GMAT), and the Law School Admissions Test (LSAT). Although these tests are not perfectly reliable (students taking them repeatedly will not get the exact same score each time), they do exhibit a high degree of consistency.

Second, the measures of a theory’s concepts must possess **validity**; that is, they must assess what they were meant to assess. To see whether the GMAT is valid, for example, we might seek to determine whether students who perform better on the test actually perform better in graduate school. This means of testing validity is called **criterion-related validation**, because it studies whether the measure really predicts the criterion (for example, grade-point average) that it is supposed to be able to predict. Criterion-related validation is based on an objective assessment of a measure’s ability to predict future events. Alternatively, we can assess validity of a measure subjectively by having experts on the concept examine the measure. These experts can determine the extent to which the content embodied in the measure actually reflects the theoretical concept being studied. This approach is called **content validation**, because it focuses on whether the content of the test is appropriate according to experts on the subject.

Reliability and validity are closely related. Reliability is necessary for validity, but it is not sufficient for proving it, because we could develop highly reliable measures that might not be valid. For example, we could probably measure people’s height reliably, but this measure would have little validity as a measure of scholastic aptitude (that is, it could not predict who would do well in graduate school). Reliability is necessary for validity, however, because an unreliable measure cannot pass any of the tests necessary for establishing validity. An unreliable measure does not relate well even to itself.

A third desirable property of the measures of a theory’s concepts is **standardization**, which means that everyone who measures the concepts uses the same instrument in the same way. Because it takes time and effort to develop measures that are reliable and valid, we can achieve a great deal of efficiency by using existing standardized measures.<sup>24</sup> Standardized measures provide two other advantages. First, they are far more likely than other measures to achieve *objectivity*. Because everyone uses the same procedures, the results of measurement are much less likely to be affected by the choice of an investigator.



Moreover, when there are changes and improvements in the standard measure, everyone adopts the new measure, resulting in quick, across-the-board diffusion of innovation. For example, in 2008, the Bureau of Economic Analysis came up with a new measure of U.S. Gross Domestic Product (GDP). The new measure was a major improvement over the existing measure because it took into consideration spending on research and development, which was formerly overlooked. This new and improved measure was quickly adopted by all researchers in that area and, thus, everyone's research was improved at the same time.<sup>25</sup> Indeed, the new measure made it clear that the recession in 2001–2002 was made worse and extended longer because of reductions in R&D spending during that period, which had obvious implications for organizations entering the 2008 recession.

Finally, standardized measures make it easy to *communicate* and compare results across situations. Although you could construct a scale to measure job satisfaction in your own company, even if you succeeded in developing a reliable and valid measure (a difficult task), you could not compare the satisfaction level in your company to that in other companies. That is because other companies will not have used (and may not be willing to use) your measure. On the other hand, the Job Descriptive Index (JDI) is a standardized measure of job satisfaction that has been used in hundreds of companies. For most standardized measures, the availability of a great deal of existing data allows you to compare your company with other companies that all have been measured on the same criteria in the same way. For these and other reasons, managers should rarely try to develop their own measures for every situation. At worst, the measures would lack reliability and validity. At best, managers would “reinvent the wheel.” Of course, on some occasion you might need to test new concepts or develop measures that are unique to your situation. Such cases, however, will be the exception rather than the rule.

## Causal Inferences

We can use the scientific method to further our understanding of evidenced based management. To translate this enhanced understanding into more effective practice, however, we must apply this learning. Knowledge is most applicable when it can be expressed in terms of cause-and-effect relationships. After identifying these relationships, we can often manipulate the causes to bring about the desired effects (such as enhanced productivity or job satisfaction). Good theory and good measures take us a long way toward achieving this objective, but they are not sufficient for identifying cause-and-effect relations (that is, making causal inferences). As noted later in this chapter, making causal inferences depends not only on how the data are obtained, but also on when the data are obtained and what is done with them once collected.

Moreover, even if a manager is not engaging in scientific experimentation but just trying to learn from daily experience, rigorously thinking about cause-and-effect relationships can ensure that he or she does not learn the wrong lesson from past experience. True learning can take place only when a person seriously reflects upon past experience and analyzes it critically. For this reason, we will closely examine how to go about making the proper causal inferences.

## Criteria for Inferring Cause

One of the foremost authorities on the philosophy of science, John Stuart Mill, argued that, to state unequivocally that one thing causes another, we must establish three criteria. First, we must establish *temporal precedence*; that is, the cause must come before—not after—the effect in time. Second, we must document *covariation*; that is, if the cause is varied (for example,

turned on or off), the effect must vary as well. Third, we must be able to *eliminate alternative explanations* for the observed results.

The first step in establishing a cause-and-effect relationship is demonstrating **temporal precedence**, which simply means that the cause must precede the effect in time. One common mistake made by people in trying to learn from experience is falsely inferring a causal relationship between two variables just because they are related at one point in time. For example, imagine that you tour a factory and observe that work groups with low absenteeism rates have supervisors who give team members a great deal of latitude and allow them to participate in decision making. In contrast, during the same factory tour, you observe that work groups with the highest absenteeism rates are closely monitored by their supervisors at all times and do not participate in decision making. It would be a mistake to jump to the conclusion that close supervision *causes* high absenteeism. It would be an even greater mistake to act on this unproven conclusion by demanding that all managers of the company “loosen up” their supervision.

In fact, the causal order between these two variables might lie in the opposite direction. That is, perhaps all supervisors started out acting the same. High absenteeism in some groups may have caused supervisors to tighten their control, and low absenteeism in other groups may have led their supervisors to give them more latitude. Failing to consider temporal precedence in this case would lead you to learn the wrong lesson from this factory tour. If you then acted on this misinformation and loosened up the supervision of the managers in the plant, absenteeism might actually worsen rather than improve. Instead of solving a problem, you may make the situation worse.

The second criterion for inferring cause is **covariation**, which simply means that the cause and effect are related. For example, if we believe that providing day care for employees' children causes lower absenteeism, then a relationship should exist between company day-care services and low employee absenteeism. Several ways to assess covariation are available, all of which rely on statistical methods. As this text is not a statistics book, and given that most readers will also take courses in statistics, we will limit our discussion here to two simple, but widely applicable, statistical techniques. Although not perfect for every situation, they are useful in a wide variety of contexts.

The first means of establishing covariation, known as a *test of mean differences*, compares the average scores of two groups on the outcome we wish to change. For example, Table 16.1 presents data on absenteeism for two groups of workers: 10 work in Plant A, which offers an in-house day-care center, and 10 work in Plant B, which lacks on-site provisions for day care. As shown in Figure 16.2, the level of absenteeism is much higher for Plant B than for Plant A. This simple analysis of mean differences suggests that day-care provision and absenteeism are, in fact, related.

We might also test for mean differences between numbers of absences at Plant A before and after the establishment of the day-care center and generate data like those listed in Table 16.2 and graphed in Figure 16.3. If the average absenteeism rates were higher before the plant installed the day-care center than they were after it was implemented, we might again conclude (before engaging in more rigorous analyses) that a relationship exists between provided day care and lower absenteeism. Both mean differences described here are easy to comprehend when presented as bar charts like those shown in Figures 16.2 and 16.3. Indeed, these kinds of charts are reminiscent of what we observed back in Chapter 6 when we saw how researchers were trying to determine whether dissatisfaction among workers at the Firestone plant “caused” them to produce faulty and dangerous tires.

A second means of establishing covariation is through the use of the **correlation coefficient**. This statistic, a number that ranges from +1.0 to -1.0, expresses the relationship

Table 16.1 Absence Data at Two Hypothetical Plants

Employee	Number of absences	
	Plant A (with day care)	Plant B (without day care)
1	10	12
2	11	11
3	8	13
4	11	8
5	3	16
6	4	14
7	3	10
8	2	4
9	1	2
10	5	3
Average	5.8	9.3

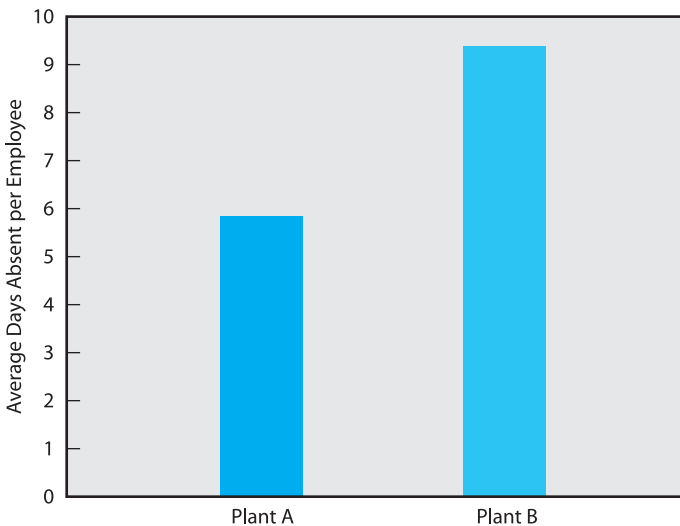


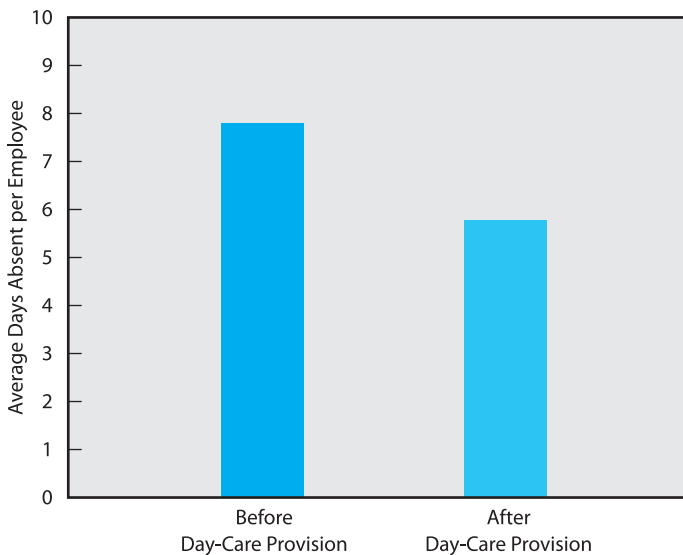
Figure 16.2 Absenteeism in Two Different Plants Assessed over One Time Period

between two things. A  $+1.0$  correlation means that a perfect positive relationship exists between the two measures in question (for example, absenteeism rates and employee age). That is, as the value of one measure increases, the value of the other increases to the same relative degree. A correlation of  $-1.0$  reflects a perfect negative relationship between the two measures. Here, as the value of one variable increases, the value of the other decreases, again to the same relative degree. A correlation of  $.00$  indicates that no relationship links the measures; thus, as the value of one measure increases, the value of the other can be anything—high, medium, or low.

To give you a feeling for other values of the correlation coefficient, Figure 16.4 shows plots of points, where each point represents a person of a given age (specified on the  $x$ -axis) and that person's corresponding level of absenteeism (specified on the  $y$ -axis). This figure depicts four correlation values:  $+1.0$ ,  $+0.50$ ,  $.00$ , and  $-0.50$ . The sign of the correlation reveals whether the

**Table 16.2** Absence Data for One Hypothetical Plant at Two Different Times

Employee	Number of absences at Plant A	
	Before day care	After day care
1	12	10
2	14	11
3	10	8
4	12	11
5	6	3
6	8	4
7	4	3
8	2	2
9	1	1
10	6	5
Average	7.5	5.8



**Figure 16.3** Absenteeism at One Plant Assessed over Two Different Time Periods

relationship is positive or negative, and the absolute value of the correlation reveals the magnitude of the relationship.

Returning to our employees at Plants A and B, Table 16.3, in addition to providing data on day care and rates of absenteeism, shows the ages of all the workers. We could use the correlation coefficient to determine whether a relationship exists between age and absenteeism. In fact, the correlation between age and absenteeism for these data is  $-0.50$ , indicating that older workers are absent less often than younger ones. If we plotted these data on a graph, where  $x$  is the horizontal axis and  $y$  the vertical axis, the result would look like the graph shown in Figure 16.4D. As you can see, graphically depicting the correlation in this fashion makes it easy to understand the strength and nature of the relationship between these two variables.

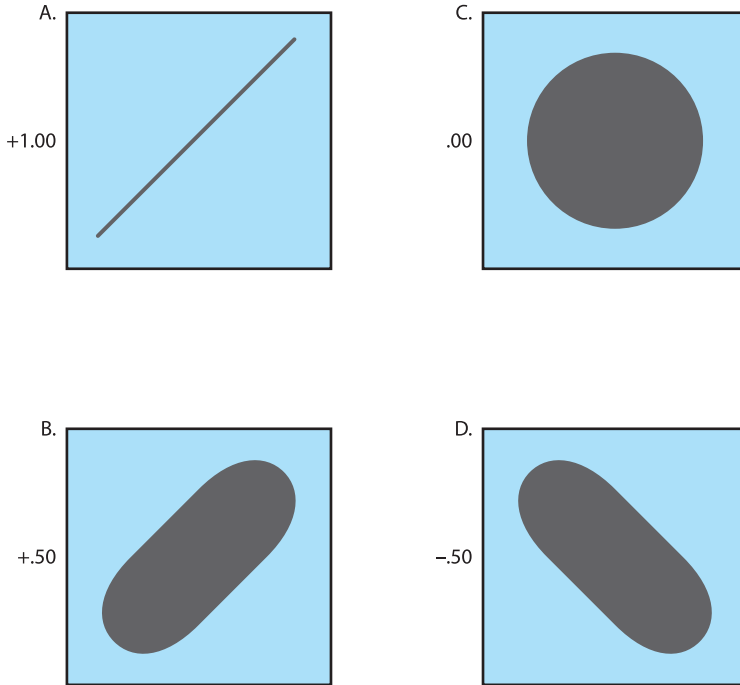


Figure 16.4 Plots Depicting Various Levels of Correlation between Variables.

Table 16.3 Absence and Age Data at Two Hypothetical Plants

Employee	Plant A (day care)		Plant B (no day care)	
	Number of absences	Age	Number of absences	Age
1	10	27	12	27
2	11	31	11	34
3	8	30	13	31
4	11	26	8	25
5	3	40	16	33
6	4	61	14	35
7	3	52	10	25
8	2	47	4	40
9	1	46	2	52
10	5	41	3	46
Average	5.8	40.1	9.3	34.8

Once we have established both covariation and temporal precedence, we are only one step away from establishing that something actually caused something else. The *elimination of alternative explanations*, Mill's third criterion for establishing cause, entails a major effort, however. In our continuing example, if we are to infer that providing day care caused lower absenteeism, we must show that no other factor caused the low rates. The complexity of most

real-world situations makes it very difficult to rule out all other possible explanations. Indeed, this problem, more than any other, complicates the process of conducting research in the applied behavioral social sciences.

In the physical sciences, experimenters can use physical means such as lead shields and vacuum chambers to isolate variables and rule out alternative causes. This kind of tight control is much more difficult to achieve in social science research. In fact, some valid alternative explanations arise so frequently that they have been given special names.

The **selection threat**, for example, involves the danger that the groups we selected for comparison were not the same initially.<sup>26</sup> If we had only the data on absenteeism in the two plants (the data in Table 16.1), the lower mean rate of absenteeism in the plant with day care might have led us to conclude, based on our past experience, that providing day care caused lower absenteeism. Our additional data show that age is negatively related to absenteeism, however, and workers in Plant A are known to be older than those in Plant B. In fact, if we controlled for age by comparing only workers who were the same age, we would find no differences in absenteeism between the plants.

At this point, you may say, “So what? What difference does it make?” It makes a huge difference if your faulty cause-and-effect judgment prompts your company to invest a large sum of money in providing day-care facilities on a corporation-wide basis. Funding of this benefit would be based on your conclusion that day care would pay for itself through lower absenteeism. Because day care is actually irrelevant to absenteeism, this investment would eventually be lost, and many people would be left wondering what happened. The selection threat is the most common threat to studies that compare two different groups at one point in time.

The **history threat** is the most common problem in studies that observe the same group in a “before-and-after” situation. It occurs when the real cause is not the change you made, but rather something else that happened at the same time. In Figure 16.3, when we compared the mean number of absences for Plant A *before* day care with the mean number of absences *after* day care, we found a lower average rate of absenteeism after the day-care program was implemented. We might be tempted to infer that the day-care center caused lower absenteeism. Suppose, however, that we obtained the “before” measure during the summer months and the “after” measure during the winter months. Perhaps people simply found more reasons to be absent in the summer than in the winter. That is, the weather—rather than the day-care center—may have caused the difference in absenteeism rates. If we extended the day-care program throughout the corporation, we would find that it would not reduce absenteeism and would again be left wondering why.

### Designing Observations to Infer Cause

The timing and the frequency of data collection affect our ability to make causal interpretations. Deciding on the timing of measurement is an important part of research design. Consider the two *faulty designs* shown in Figure 16.5. In the One Group Before-After design (Figure 16.5A), data are collected both before and after some event or treatment. If the after score differs from the before score, we assume that the change in the situation caused the difference. The flaw in this design relates to the history threat, which is an alternative explanation for the results. In our day-care example, if we collected data from only one plant, once in the summer and once in the winter, we would be using this type of faulty design.

In the After Only with Unequal Groups design (Figure 16.5B), data are collected from two groups, one of which experiences a situation while the other does not. This design is flawed because we do not know for certain that the groups were equal before the treatment or during

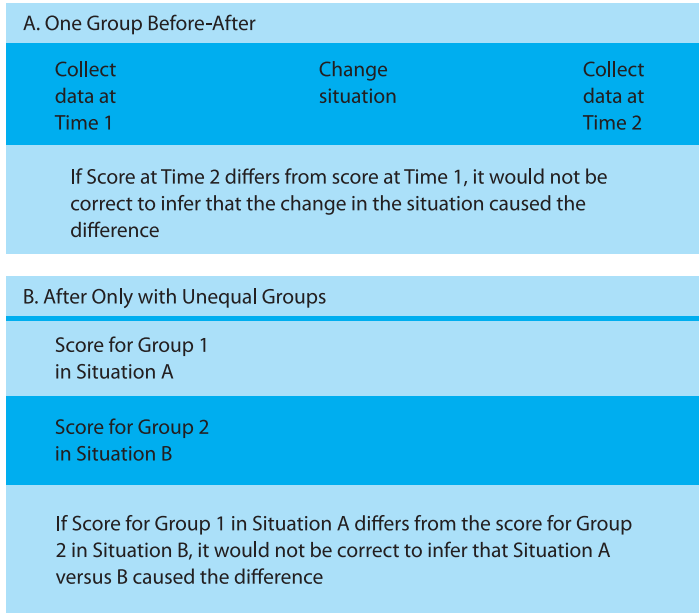


Figure 16.5 Two Faulty Research Designs

the treatment; thus the selection threat might explain the results. In our day-care example, we collected data from both Plant A and Plant B without verifying that the people in those plants were similar (for example, were the same age on average); thus our experiment has this kind of faulty design. Such designs constituted the structure underlying many of our day-to-day past experiences, and, if not analyzed critically, they can lead us to learn the wrong lessons from those past experiences.

We can change designs in several ways to help eliminate some of these threats. Consider the One Group Before-After design, where the history threat poses the major problem. We could improve the situation by adding a control group (that is, a group that does not receive the day-care assistance), thereby turning the design into the Two Groups Before-After design (Figure 16.6A). This design allows us to test whether the two groups were equal initially by comparing scores at Time 1. That is, in our day-care example, was the rate of absenteeism in Plants A and B similar before the treatment—the day-care center—was implemented? This design also allows us to test whether some historical factor other than the day-care center could have caused the results. That is, if the real cause was time of the year (summer versus winter), we could expect a decrease in absenteeism in Plant B as we moved from Time 1 to Time 2, even though no day-care center was established there.

The Two Groups After Only model becomes even stronger in terms of causal inferences if people are randomly assigned to the groups. **Random assignment** of people to conditions means that each person has an equal chance of being placed in either the experimental or the control group. We can achieve this random arrangement by pulling names out of a hat, flipping coins, tossing dice, or using a random numbers table from a statistics book. In our day-care study, if we could have initially assembled the 20 workers at the two plants and then tossed a coin to see who would get day care and who would not, the odds are that, when we were finished, the two resulting groups would have been equal in age. That is, each group would have included roughly the same number of people of a given age.

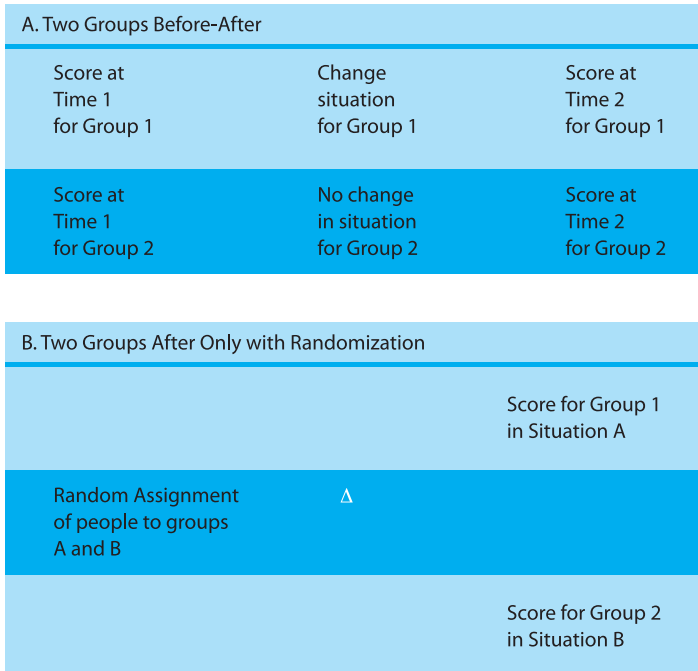


Figure 16.6 Two Improved Research Designs

In fact, the real value of randomization is that it not only equalizes groups on factors (such as age) expected to influence results, but also equates groups on virtually all factors. Thus, in our day-care study, if we randomized the groups at the outset, we could be fairly confident that they would be equated not only on age, but also on other factors, such as height and weight. You might not think that a person's height or weight would relate to absenteeism, but some research has found such a relationship between absenteeism and weight.<sup>27</sup> Even if we were unaware of this relationship at the outset of the day-care study, it is nice to know that randomization neatly solved a potential problem. In fact, the equalizing effect of random assignment is so powerful that one can often infer cause even in the absence of a before measure. For example, Figure 16.6B shows the Two Groups After Only design, where two groups are established randomly and then exposed to two different situations. Even though there is no before measure that proves the two groups were equal on other potential causal factors, one can safely presume that randomization made them equal (provided there were enough cases), and infer that any differences between the two situations were actually caused by the situation and not some external factor. Because of randomization's ability to rule out both anticipated and unanticipated selection threats, people conducting experiments should randomly assign subjects to treatments whenever possible.

Because randomization is not always possible, we must often resort to other tools to rule out selection threats. Suppose that, when we start our day-care experiment, we know that workers at the two plants are not evenly distributed in terms of age, and we know that age affects absenteeism. In the real world, we cannot randomly move people from plant to plant; we must work with existing groups.



How, then, can we rule out age as the alternative explanation for our results? We have several choices. First, we could use *homogeneous* groups, or study groups that do not differ in age. For example, we might compare absenteeism in the two plants, but only among workers who are 25 to 35 years old. As you can see from Table 16.3, we would therefore compare Persons 1, 2, 3, and 4 in Plant A with Persons 1, 2, 3, 4, 5, 6, and 7 in Plant B. With this sample, if we still found lower absenteeism in Plant A than in Plant B, we could not attribute the difference to age, because all subjects were roughly the same age.

Alternatively, we could also equate groups by *matching subjects*. For example, we might study only the subjects in Plant A for whom there are corresponding subjects in Plant B, or subjects who are within two years of one another in terms of age. Thus, looking again at Table 16.3, we could match Subjects 1, 2, 5, 7, and 9 in Plant A with Subjects 1, 3, 8, 9, and 10 in Plant B. If we found lower absenteeism in one plant, we could not attribute this result to age because we equated the groups on this factor.

Finally, we could *build the threat into the design*. That is, we could simply treat age as another possible factor affecting the rate of absenteeism and examine its effect at the same time that we study the effect of day care. One advantage of building alternative explanations into your design is that you can then test for **interactions**. An interaction exists when the relationship between the treatment (the day-care center, in our example) and the outcome (absenteeism) depends on some other variable (age). Figure 16.7 shows a possible result if we built the alternative explanation of age into our day-care study. As you can see, among the younger group of workers, providing day care does lower absenteeism; among the older group, however, it has no effect. Thus the relationship between day care and absenteeism depends on the factor of age.

Clearly, many factors must be considered in designing studies that will allow us to infer causality. The more variables we can control, the tighter our research design, and the more likely that we can rule out alternative explanations for any relationships discovered.

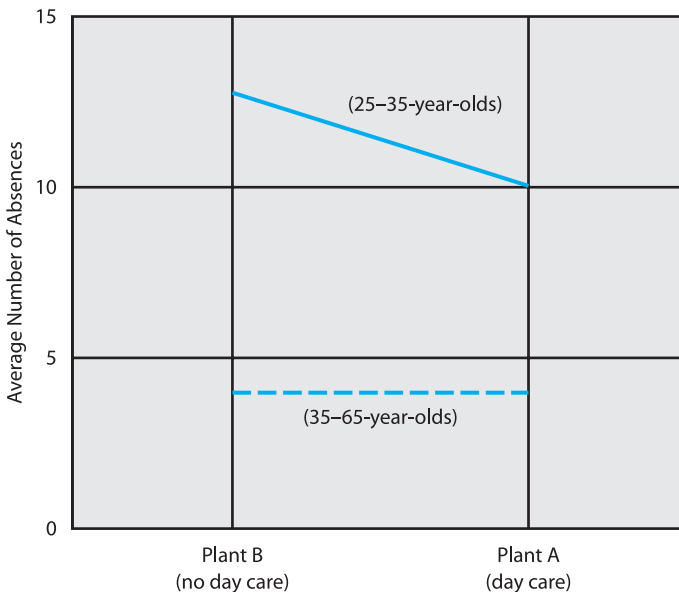


Figure 16.7 The Effect of Age and Day-Care Facilities on Absenteeism

## Generalizing Research Results

Research is usually conducted with one sample, in one setting, at one time period. Often, however, we wish to know the generalizability of results, where **generalizability** is defined as the extent to which results obtained in one sample–setting–time configuration can be repeated in a different sample–setting–time configuration. This ability is sometimes of interest when we are conducting research, but always critical when we evaluate research findings to see whether what worked for the investigators can be applied in a real-world setting.

### Sample, Setting, and Time

Our day-care example provides a good illustration of how results might not generalize across all samples. Recall that the results of our study eventually showed that provision of day care reduced absenteeism among workers who were 25 to 35 years old but not among members of the older group. Astute managers who studied our results would want to apply these lessons only if their company employed a large number of workers in this age category.

Suppose, however, our design homogenized our subjects on age (that is, used only people in the 25 to 35 bracket). In this case, we would have reported simply that providing day care reduced absenteeism. Managers who read these results, but did not pay enough attention to the details on age, might institute day-care centers in companies where the age of the workforce was not the same as in this original plant, and expect the same results. These managers would soon discover that the results of our work did not generalize to their organizations. Thus a major drawback of making groups homogeneous is that it limits our ability to generalize results across other types of samples.

We may also be concerned about generalizing research results across settings. For example, suppose that both of the plants in our original study were located in rural settings. Assume further that it is more difficult to obtain high-quality day care in rural settings than in urban settings. Someone reading the results of our study who manages a plant in an urban area might establish an in-plant day-care center, only to find that the center has no effect on absenteeism, because childcare is not a problem for workers in urban settings. Here again, our results would not generalize to another setting.

Finally, we might worry about whether our results would generalize across time. For example, suppose that we conducted our study during a time characterized by a huge labor shortage; many more jobs were available than there were people to fill them. At such a time, unemployment rates would be low, both parents might well be working, and many people who might in other circumstances serve as day-care providers would very likely be working at different and perhaps higher-paying jobs. Thus, at the time when we conducted our study, demand for day-care services might have been high but only a small supply was available. By providing our own day-care services, we solved a major problem for our workers with small children, which ultimately led to lower absenteeism rates.

Now move forward ten years, to a time characterized by a labor surplus. Unemployment is high, one parent is likely not working, and anyone capable of setting up a day-care center has opened a business. In this situation, because the demand for day care is small and the supply of day-care services large, company-sponsored day care does not provide a needed service to employees. Consequently, no relationship exists between providing day care and lowering absenteeism. In this case, our results do not generalize across time.

### Facilitating Generalization

You may wonder whether any findings are generalizable given the many factors that might differ from one unique sample–setting–time to another. From a researcher’s perspective, can we take any steps to increase the ability to generalize? The answer is “yes.” Technically, we can safely generalize from one sample to another if the original sample of people we study is *randomly selected* from the larger population of people to which we wish to generalize.

As an historical example of random selection, you may have noticed that in presidential elections the television networks usually declare a winner when less than 10 percent of the actual results are available. As we saw in the famous 2000 Al Gore–George W. Bush election, when the networks mistakenly called the race in Florida first for Gore, an error in this process can prove highly embarrassing.

The key to successfully predicting the final outcome from the initial, partial results is randomly selecting the people polled from the voting population. This procedure ensures that the small percentage of people who are polled are, by all odds, exactly the same as the larger group of voters. In fact, the science of polling is so accurate that it is exceedingly rare for these judgment calls to prove to be wrong. Indeed, many believe that the science of polling is more accurate than the science of the voting machines, and some have speculated that the machines, rather than the pollsters, actually made the wrong call in the 2000 presidential results from Florida. That is, a large number of people who told the pollsters that they voted for Gore may have failed to punch their ballots correctly (especially the infamous “butterfly ballots”). Thus the pollsters may have captured the voters’ intentions better than the voting machines did.

Although random selection is the only way to guarantee the ability to generalize results across samples, from a practical perspective it is often very difficult to achieve. Thus, many organizations like to rely on web based surveys where applicants volunteer their opinions for free, as opposed to conducting random sampling from the telephone book, where many of those chosen have to be paid to participate. Although cheaper than the random sampling method, this “convenience based” sample that may spring from one’s website will differ from the population, and most studies suggest it generates younger, more opinionated, less socially active, and less physically active respondents.<sup>28</sup> Any results that are found with this convenience sample will not generalize to groups that are older, less opinionated, or more socially and physically active.

For example, Starbucks routinely polls customers on its website and asks for suggestions about how to improve products or services. If the people who respond to these web based surveys differ from the average customer, then the ideas that are suggested might not turn out to work very well for the average customer. In fact, the company found that people who spent a lot of time with their surveys tended to have time on their hands and really loved coffee. They generated many ideas that made taking orders more complex and time-consuming, and hence created longer waiting lines. The average customers, who had less time on their hands and were less discerning about how they obtained their caffeine, reacted very negatively to the ideas generated by the web based sample. Because of this experience, Starbucks will not adopt any recommendations derived from web based samples without a follow-up test with a random sample.<sup>29</sup>

Studies that employ random selection are usually huge in scale, requiring the efforts of many investigators and a great deal of money. More often, in the real world of research, the ability to generalize a finding is achieved not by undertaking one large experiment, but rather by conducting many small experiments, using the same measures, in which results are replicated in a host of different sample–setting–time configurations. For example, Chapter 5 discussed research results that generalize very well, such as the repeated finding that high

performance is more likely to result from setting specific and difficult goals than from offering vague goals like “do your best.” The generalizability of this finding comes not from one large study that randomly sampled people, settings, and times, but rather from many smaller studies, each of which used different samples, settings, and times but obtained the same result.

Although generalizing results is always of interest in evaluating research, the original researchers may not emphasize this issue. Often research is conducted strictly to test or build theories. In such a case, investigators may be less interested in what *does* happen than in what *can* happen.<sup>30</sup> For example, research on biofeedback shows that people can learn to control some of their own physiological processes, such as heart rate and blood pressure, when hooked up to special devices that give them information on these processes. You might think that few real-world situations correspond to the one faced by subjects in this kind of research. That is not the point of this research, however. Rather, this research is intended to test the theory that humans can voluntarily control supposedly involuntary physiological responses when provided with the appropriate feedback. Nothing inherent in this theory suggests that it would not work with college sophomores in a laboratory setting at some specific time period. Thus, if the results fail to support the theory in this sample–setting–time configuration, we must either reject the theory or modify and retest it. The fact that the subjects, settings, and times were randomly selected is completely irrelevant. With this kind of research, the ultimate aim is not to make the laboratory setting more like the real world, but rather to make the real world more like the laboratory—that is, to change the real world in ways that benefit us all.

## Linking Organizational Behavior Science and Practice

As noted earlier, people in knowledge-creating companies or learning organizations are encouraged to experiment. As a practicing manager, however, you should recognize that a wealth of research conducted by others is just waiting to be discovered. Some studies might deal directly with an issue that is critical to your company or your career or with a problem you are trying to manage. Rather than conducting your own experiment (a choice that is costly in terms of both time and money), you might be able to generalize these studies’ findings to your context. Table 16.4 lists some of the major scientific journals that publish theory and research related to topics covered in this book.

A great deal of the research into this area is performed by people working in university settings. Thus you may be able to uncover research on topics of interest by contacting university faculty who publish frequently on aspects of organizational behavior. Faculty and students at local universities can help with management issues, and these people bring fresh perspectives, unique skills, and diverse experiences to the organization. In return, university personnel may provide internships and case studies, or conduct field research in your

**Table 16.4** The Seven Most Influential Journals in the Management Field

1. *Administrative Science Quarterly*
2. *Academy of Management Review*
3. *Academy of Management Journal*
4. *Personnel Psychology*
5. *Journal of Applied Psychology*
6. *Organizational Behavior and Human Decision Processes*
7. *Strategic Management Journal*

Source: P. M. Podsakoff, S. B. MacKenzie, D. G. Bachrach, and N. P. Podsakoff, “The Influence of Management Journals in the 1980’s and 1990’s,” *Strategic Management Journal* 26 (2005), 473–488.

organization that may result in excellent learning opportunities that promote organizational effectiveness.

Specialized expertise in certain management topics can also be found in some consulting companies. However, one should not count on gaining a sustainable competitive advantage from these types of outside sources. Consulting companies do not always have the answer to your question, and many have their own set of organizational problems that make it difficult for them to truly meet the needs of their clients.

People who teach organizational behavior and executive development often lament the inadequate dialogue that takes place between practicing managers and researchers. This kind of dialogue can develop only when managers and researchers understand each other's work and appreciate its value in guiding their own efforts. Practicing managers need to know what organizational behavior researchers do and why they follow certain paths. Researchers, in turn, need to identify practitioners' most pressing problems so that they can study those issues that managers view as significant. Because it is so important to create and encourage this kind of ongoing practitioner–researcher dialogue, we have included this chapter on research methods in this book.

Although you may never conduct formal research yourself, you will undoubtedly find it invaluable to familiarize yourself with the large body of scientific evidence available on topics that will be crucial to you, your employer, and your employees. Although this research may not provide all the answers you need, it will certainly inspire and intrigue you, perhaps promoting the kind of spirit embodied in some of the learning organizations that rely on evidence based management described at the outset of this chapter.

## Summary

Traditional ways of acquiring knowledge, such as rationalism, personal experience, and reliance on authorities, have many limitations. The advantage of science relative to these more traditional means of knowledge acquisition is its *objectivity*, and science as an enterprise tends to be public, self-correcting, and cumulative. The major goals of science are the description, explanation, prediction, and control of various phenomena. These goals are achieved through an interplay of *theory* and *data*, whereby ideas contained in theories are expressed in testable *hypotheses*, which are then compared with actual data. The correspondence (or lack thereof) between the hypothesized results and the actual results is then used to verify, refute, or modify the theory.

Good theories are characterized by simplicity, self-consistency, and consistency with known facts; they should also contribute to the objectives of science. To be useful, data for testing theories should be *reliable* and *valid*. In obtaining such data, using established *standardized* measures offers many advantages. At the core of many theories lies the idea of establishing causes. Cause can be inferred only when we establish *temporal precedence* and *covariation*, and when we eliminate all *alternative explanations*. The last requirement is often the most troublesome aspect of research in the social sciences, and threats such as *selection* and *history* threats can prove especially problematic. We partially avoid these threats by employing research designs that use control groups and make these controls comparable to experimental groups through *randomization*, *matching*, or *homogenization*. To *generalize* the findings from one study to another context, it is necessary to randomly select samples, settings, and time periods. This goal is rarely achieved to its fullest extent in the social sciences. Nevertheless, if experimental results are repeatedly confirmed in different samples and settings and at different times, it may be possible to generalize such findings.

## Review Questions

1. Many theories seem to follow a similar pattern. They start out simple, grow increasingly complex as empirical tests on the theory proliferate, and then die out or are replaced by new theories. Review the criteria for a good theory and discuss why this pattern occurs so commonly. In your discussion, specify possible conflicts or inconsistencies among the criteria for a good theory.
2. Although objectivity is a hallmark of scientific inquiry, all scientists have their own subjective beliefs and biases surrounding the phenomena they study. Indeed, some scientists are motivated to do their work precisely because they hold passionate beliefs about these phenomena. Discuss whether this kind of passion is an asset or a liability to the scientist. In addition, discuss how science can be an objective exercise even though the people who practice it demonstrate personal biases. What prevents a passionate scientist from cheating or distorting results in favor of his or her personal beliefs?
3. Experiments in organizations usually involve people other than the experimenters—that is, managers or employees. What are some of the ethical responsibilities of an experimenter with respect to these people? Is it ethical, for example, for an experimenter to use one group of employees as a control group when he or she strongly suspects that the treatment given to the experimental group will enhance the members' chances for success, promotion, or satisfaction? If the experimenter is afraid that explaining the nature of the experiment will cause people to act differently than they would otherwise (and hence ruin the experiment), is it ethical to deceive them about the study's true purpose?
4. Philosopher of science Murray S. Davis once remarked that “The truth of a theory has very little to do with its impact.”<sup>31</sup> History, according to Davis, shows that the legacy of a theory depends more on how interesting the theory is perceived to be by practitioners and scientists than on how much truth it holds. Earlier in this chapter, we listed criteria for good theories; now list what you think are criteria for “interesting” theories. Where do these two lists seem to conflict most, and how can scientists and the practitioners they serve generate theories that are both interesting and truthful?



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