

# Nonverbal Communication in Close Relationships



Laura K. Guerrero • Kory Floyd



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# **NONVERBAL COMMUNICATION IN CLOSE RELATIONSHIPS**

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# NONVERBAL COMMUNICATION IN CLOSE RELATIONSHIPS

Laura K. Guerrero  
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# Contents

Series Foreword <i>Steve Duck</i>	vii
Preface	xi
<b>1 Introduction</b>	<b>1</b>
Defining Nonverbal Communication	4
Perspectives on What Counts as Communication	9
An Overview of the Book	15
<b>2 Major Paradigms and Theories of Nonverbal Communication</b>	<b>17</b>
The Bio-Evolutionary Paradigm	18
The Sociocultural Paradigm	27
Specific Theories	35
Summary	54
<b>3 Interpersonal Attraction</b>	<b>57</b>
The Importance of Attractiveness	58
Markers of Physical Attractiveness	62
Flirting and Courtship	79
Summary	82
<b>4 Communicating Affection</b>	<b>84</b>
How Do Humans Convey Affection Nonverbally?	85
Predicting the Use of Nonverbal Affection Behaviors	95
Summary	105

<b>5</b>	<b>Nonverbal Expressions of Emotion</b>	<b>107</b>
	Defining Emotion <i>108</i>	
	Nonverbal Expressions of Emotions in Relationships <i>109</i>	
	Emotional Skill in Close Relationships <i>121</i>	
	Summary <i>131</i>	
<b>6</b>	<b>Nonverbal Correlates of Power and Interpersonal Dominance</b>	<b>133</b>
	Defining Power, Dominance, and Status <i>134</i>	
	Relative Power and Dominant Communication in Relationships <i>137</i>	
	Nonverbal Correlates of Power <i>140</i>	
	Sex Differences in Power Cues <i>145</i>	
	Reducing Power Differentials <i>149</i>	
	Interpersonal Dominance Through Social Skill <i>150</i>	
	Interpersonal Dominance Through Intimidation or Threat <i>157</i>	
	Summary <i>160</i>	
<b>7</b>	<b>Interpersonal Deception</b>	<b>162</b>
	What Is Deception? <i>163</i>	
	What Happens to People When They Deceive? <i>166</i>	
	Nonverbal Behaviors That Accompany Deception (and Some That Do Not) <i>173</i>	
	Detecting Deception <i>181</i>	
	Summary <i>196</i>	
<b>8</b>	<b>Conflict and Disengagement</b>	<b>198</b>
	Defining Conflict in the Context of Relationships <i>199</i>	
	Conflict Strategies <i>202</i>	
	Nonverbal Conflict Behaviors <i>206</i>	
	Communication Patterns <i>214</i>	
	Relationship Disengagement <i>218</i>	
	Summary <i>223</i>	
<b>9</b>	<b>Afterthoughts</b>	<b>225</b>
	Implications for Each Content Area <i>226</i>	
	Conclusion <i>238</i>	
	<b>References</b>	<b>239</b>
	<b>Author Index</b>	<b>281</b>
	<b>Subject Index</b>	<b>295</b>

# Series Foreword

Steve Duck  
University of Iowa

Since its inception the Personal Relationships series from Lawrence Erlbaum Associates has sought to review the progress in the academic work on relationships with respect to a broad array of issues and to do so in an accessible manner that also illustrates its *practical* value. The LEA series already includes books intended to pass on the accumulated scholarship to the next generation of students and to those who deal with relationship issues in the broader world beyond the academy. The series thus not only comprises monographs and other academic resources exemplifying the multidisciplinary nature of this area, but also books suitable for use in the growing numbers of courses on relationships and in the growing number of professions which deal with relationship issues.

The series has the goal of providing a comprehensive and current survey of theory and research in personal relationship through the careful analysis of the problems encountered and solved in research, yet it also considers the systematic application of that work in a practical context. These resources not only are intended to be comprehensive assessments of progress on particular “hot” and relevant topics, but also have already shown that they are significant influences on the future directions and development of the study of personal relationships and application of its insights. Although each volume is well centered, authors all attempt to place the respective topics in the broader context of other research on relationships and within a range of wider disciplinary traditions. The series already offers incisive and forward-looking reviews and also demonstrates the broader theoretical implications of relationships for the range of disciplines from which the research originates. Collectively the volumes include origi-



nal studies, reviews of relevant theory and research, and new theories oriented toward the understanding of personal relationships both in themselves and within the context of broader theories of family process, social psychology, and communication.

Reflecting the diverse composition of personal relationship study, readers in numerous disciplines—social psychology, communication, sociology, family studies, developmental psychology, clinical psychology, personality, counseling, women's studies, gerontology, and others—will find valuable and insightful perspectives in the series.

Apart from the academic scholars who research the dynamics and processes of relationships, there are many other people whose work takes them up against the operation of relationships in the real world. For such people as nurses, the police, teachers, therapists, lawyers, drug and alcohol counselors, marital counselors, the priesthood, and those who take care of the elderly, a number of issues routinely arise concerning the ways in which relationships affect the people whom they serve and guide. Examples are the role of loneliness in illness and the ways to circumvent it, the complex impact of family and peer relationships upon a drug-dependent's attempts to give up the drug, the role of playground unpopularity on a child's learning, the issues involved in dealing with the relational side of chronic illness, the management of conflict in marriage, the establishment of good rapport between physicians and seriously ill patients, the support of the bereaved, the correction of violent styles of behavior in dating or marriage, and even the relationships formed between jurors in extended trials as these may influence a jury's decisions. Each of these is a problem that may confront some of the aforementioned professionals as part of their daily concerns and each demonstrates the far-reaching influences of relationship processes on much else in life that is presently theorized independently of relationship considerations.

The present volume deals with the basic elements of behavior that influence interpretation of the spoken word and also convey their own messages: nonverbal communication (NVC). The authors take a perspective on NVC that places the exchange of messages at the heart of the communication process, defining NVC as nonlinguistic messages that people exchange in interactive contexts. Such messages include behaviors that are dynamic as well as those that are static parts of the communication process and range from physical appearance to movement and gesture or vocal cues. These familiar elements of every interaction have important consequences for interpretation of behavior and exert significant power on the understanding of what is occurring in relationships, including the mistakes and misinterpretations that create difficulty in relationships. The book is important because it places NVC in the context of personal relationships and looks at its effects and its roles in processes of attraction, affection, emo-

tion, power, deception, and conflict. Not only are these topics important in relationships but the narrative of the book allows them to be discussed in the context of relational development overall and hence to show the developing role of NVC in relationships across time rather than, at least in some early work, confining the role of NVC to the earliest stages of relationships with nonintimates. The book thus makes an important contribution to the development of our understanding not only of relationship processes but also of the workings of NVC as a whole. Finally, the practical applications of discussions about deception and conflict are all too necessary in understanding relationships in the real world and the book's practical value in this respect fulfills the overall mission of the series very adroitly.

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## Preface

There is abundant advice from various media about how to communicate within relationships. Televised talk shows, popular magazines, and self-help books often emphasize that effective communication is integral to happy, healthy relationships. Yet the advice found in the media often fails to reflect the complexity of human communication, including the nuances of nonverbal messages. Many laypeople equate nonverbal communication with body language, without recognizing that cues related to touch, space, the voice, physical appearance, the environment, and time also send important relational messages. Although this book touches upon practical applications for couples, our primary objective was to summarize and integrate research on nonverbal communication as it applies to interpersonal interaction. The research clearly shows that nonverbal communication is a complex phenomenon subject to multiple interpretations and misinterpretations.

In the first two chapters, we argue that nonverbal communication is a dynamic process that is influenced by biology and evolution as well as culture and socialization. In chapter 1, we take the position that not all nonverbal behavior is communication; rather, a source must intentionally send a message and/or a receiver must interpret a message. According to this process-oriented perspective, three types of message exchange constitute the clearest examples of communication: behaviors that are sent intentionally and decoded accurately (successful communication), behaviors that are sent intentionally but decoded inaccurately (miscommunication), and behaviors that are sent without intent but nonetheless decoded accurately (accidental communication). We believe that all of these forms of message exchange, plus situations involving attempted communication (a message is

sent intentionally but not received) and misinterpretation (a behavior is performed without intent and interpreted incorrectly) shape the perceptions and emotions within relationships. In chapter 2, we argue that nonverbal communication is a product of biology, social learning, and relational context, as many theories of nonverbal exchange suggest. We then overview six prominent nonverbal theories—expectancy violations theory, discrepancy arousal theory, cognitive valence theory, communication accommodation theory, interaction adaptation theory, and the parallel processing model—and show how each is related to the bio-evolutionary or sociocultural perspectives.

The heart of the book then focuses on various functions of nonverbal communication. Several nonverbal scholars, including Judee Burgoon and Miles Patterson, have organized their work on nonverbal communication around essential functions, such as intimacy, power, impression management, deception, and interaction management. In this book, we focus on those functions that seem most relevant to the initiation, maintenance, and dissolution of close relationships. These chapters are ordered in a loosely developmental fashion, with fictional characters we have created (Tina and David) used to provide examples of how nonverbal cues may affect a relationship at different stages. We cover the functions of attraction (which is related to impression formation), affection, emotion, dominance, deception, and conflict/disengagement. Some of these chapters are more relationally focused than others. For example, the deception chapter offers many claims that have been tested outside the boundaries of close relationships. The emotion and conflict chapters, however, focus more on how nonverbal behavior functions in close relationships such as marriages. All of the chapters offer information that is relevant to various types of interpersonal interaction. We believe the differences in level of relational focus are reflective of the state of the research on each of the functions we cover.

Finally, in the last chapter we discuss some of the practical implications that emerge from the scholarly literature on nonverbal communication in relationships. We hope this chapter is helpful to researchers, clinicians, and couples who want a better understanding of the complicated roles that various nonverbal cues play in relationships. We also urge readers to use this chapter, as well as other chapters in the book, as a springboard for asking new questions and advancing new theories about nonverbal communication. Throughout the book, we highlight areas where research is either contradictory or inconclusive, hoping that in the years to come scholars will have a clearer understanding of these issues.

Writing a book is a time-consuming but intellectually stimulating and rewarding experience. We have many people to thank for making this book-writing experience both possible and rewarding. Our mentors—Judee Burgoon, Peter Andersen, Mac Parks, and Valerie Manusov—taught us about

nonverbal communication and inspired us to learn more. We are grateful to Steve Duck, who invited Laura (several years and two pregnancies ago) to write a book on nonverbal communication for the Series on Personal Relationships (and Laura is grateful to Kory for collaborating with her and adding his invaluable expertise to this project). We are honored to be part of a series edited by Steve Duck, who has been a pioneer and enduring influence in the field of personal relationships. We would also like to thank our colleagues at Arizona State University for their support, especially Jess Alberts, Dan Canary, Paul Mongeau, and Susan Messman, who are always ready and willing to talk about relational issues.

It has been a joy working with many individuals at LEA who provided us with patience and encouragement as well as publication support. In particular, we are grateful to Linda Bathgate and Karin Wittig Bates who oversaw the project, and to Sondra Guideman who edited our manuscript and prepared it for composition.

Finally, our family and friends helped us in many ways. Laura's husband, Vico, and her daughters, Gabrielle and Kristiana, deserve a special word of praise, as do Kory's family and his many close friends. At an instrumental level, they gave us the time we needed to complete this book. At an interpersonal level, they provided us with support and encouragement. Most important, however, our family and friends provide us with daily examples of the power that nonverbal communication has in relationships. We learn as much from them as we learn from the literature.

—*Laura K. Guerrero*

—*Kory Floyd*

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## Introduction

*Mr. Bhaer could read several languages, but he had not learned to read women yet. He flattered himself that he knew Jo pretty well, and was, therefore, much amazed by the contradictions of voice, face, and manner, which she showed him in rapid succession that day, for she was in half a dozen different moods in the course of a half an hour. When she met him she looked surprised, though it was impossible to help suspecting that she had come for that express purpose. When he offered her his arm, she took it with a look that filled him with delight; but when he asked if she missed him, she gave him such a chilly, formal reply that despair fell upon him. On learning his good fortune she almost clapped her hands; was the joy all for the boys? Then, on hearing his destination, she said "So far away?" in a tone of despair that lifted him on to a pinnacle of hope; but the next minute she tumbled him down again by observing, like one entirely absorbed in the matter—"here's the place for my errands. Will you come in? It won't take long."*

—Alcott (1869/1995, pp. 539–540)

Nonverbal behavior is pivotal in this passage from *Little Women*, in which the author, Louisa May Alcott, describes Professor Friedrich Bhaer's interpretation of Jo March's vocal, facial, and bodily cues when they meet and she finds out that he has accepted a teaching position far away. In the book, all ends well with Jo and Friedrich marrying and successfully running a school for boys. Of course, an alternative ending would have been just as plausible, with Professor Bhaer walking away in frustration and never seeing Jo again. In real life, relationships sometimes suffer when people send conflicting nonverbal messages, express negativity through nonverbal



cues, or misinterpret one another's behaviors. Nonverbal communication is also a potent means for showing affection, expressing positive emotion, and otherwise maintaining satisfying relationships. Indeed, nonverbal communication is instrumental in the development and maintenance of personal relationships. Patterns of nonverbal communication during everyday interaction as well as conflict episodes also distinguish happy couples from distressed couples (see chaps. 5 and 8, this volume).

There are at least four reasons why studying nonverbal communication can help to illuminate the dynamics of personal relationships. The first—and, perhaps, the most compelling—is that nonverbal communication is the predominant means of conveying meaning from person to person. Although some have suggested that as much as 93% of conversational meaning is communicated nonverbally (Mehrabian, 1968), more conservative estimates indicate that nonverbal behaviors account for 60 to 65% of the meaning conveyed in an interpersonal exchange (Birdwhistell, 1970; Burgoon, 1994). That is, even conservative estimates ascribe nearly twice as much meaning-making power to nonverbal communication as to verbal—and it is not difficult to understand why, given the number of nonverbal channels and the range of nonverbal behaviors to which people have access. Whereas verbal communication is typically conducted either by speaking or by writing, nonverbal communication encompasses a broad array of visual, vocal, tactile, olfactory, gustatory, chronemic, and artifactual behaviors, many of which are routinely enacted in concert with each other to convey meaning. Moreover, nonverbal communication is multimodal; people can use multiple nonverbal cues at the same time (e.g., smiling while gesturing and sitting in a slumped position) whereas people can only speak or write one word at a time.

A second reason nonverbal communication warrants attention is that, when nonverbal cues conflict with verbal messages, people are more likely to believe what is being conveyed to them nonverbally (Burgoon, 1994; cf. Langton, O'Malley, & Bruce, 1996). When one friend tells another that she is doing well, but her posture, tone of voice, facial expressions, and lack of immediacy suggest otherwise, her friend is most likely to draw the opposite conclusion, having privileged the information received through the nonverbal channels. The reason people privilege nonverbal communication is related to the amount of control and intent typically attributed to verbal versus nonverbal behaviors. As Newton and Burgoon (1990b) noted, verbal messages are frequently constructed and conveyed with a high degree of control, conscientiousness, and intent (although these can certainly vary by context and by message modality). However, nonverbal cues vary widely on these dimensions. Some nonverbal behaviors are simply outside of a person's control; these include automatic reflex actions such as pupil dilation during exposure to strong light or sweating during episodes of fear

(Andreassi, 2000). Other nonverbal behaviors can be controlled but often are not, due to people's lack of awareness of them. A good example is the increased fidgeting that often accompanies nervousness; although hand movement is well within the control of most people, fidgeting is a tell-tale sign of nervousness because people are often unaware they are doing it.

One consequence of the difference in control that people routinely exercise over their verbal and nonverbal messages is that the latter are often seen to reflect more accurately a person's true cognitive or emotional state. (This observation has fueled research on the nonverbal correlates of deception; see chap. 7, this volume.) Thus, while one friend tells another that she is doing well, her friend is more likely to believe the signals being sent by her nonverbal behavior and to conclude that she is distressed. Although we do not wish to imply that nonverbal communication allows people to read other people like a book (Nierenberg & Calero, 1990), it does offer the opportunity to see beyond the level of control inherent in verbal communication and to obtain a more complete—and sometimes, a more accurate—picture of other people. To the extent that honesty and trust are cherished qualities in personal relationships, this aspect of nonverbal communication makes it particularly worthy of attention.

Third, nonverbal behavior is the primary means of expressing—and indeed, experiencing—emotion (Burgoon, Buller, & Woodall, 1996; Planalp, 1998). Highly intense emotional states are routinely manifested in nonverbal behaviors: crying or wailing with intense sadness, trembling with intense fear, smiling uncontrollably with intense happiness, and turning red in the face with intense anger or embarrassment. In fact, some have gone so far as to suggest that these observable signs are not simply outcomes of emotional experience but may actually be part and parcel of the emotions themselves (see Levenson, 1988). There certainly can be little question that people's moods and emotions are influenced by the nonverbal cues they receive from others. A robust body of research (summarized in chap. 3, this volume) indicates, for instance, that people prefer to interact with others who are visually attractive, who have attractive-sounding voices, and who smell nice. Pleasantness in any or all of these nonverbal cues can therefore play a part in elevating the mood of others with whom a person comes in contact. Similarly, research has indicated that particular colors and smells can have emotion-enhancing or inhibiting effects (e.g., Hirsch, 1998).

Finally, nonverbal communication is highly meta-communicative. We routinely use nonverbal behaviors to enhance, clarify, or qualify the meaning of a verbal message. For instance, we can use a certain facial expression and tone of voice to indicate that what we are saying is sarcastic and is not meant to be believed literally. Similarly, illustrator gestures are used to add meaning to a verbal message; pointing in a specific direction while saying "it's over there," for instance, or using one's hands to illustrate the shape or

size of something one is verbally describing. Nonverbal cues can also be used in concert to send particularly clear or especially confusing messages. An individual might use a host of immediacy cues, such as smiling, leaning forward, and speaking in an enthusiastic voice, to send a clear message of interest and conversational involvement. Or, like Jo March in the passage at the beginning of this chapter, individuals might send (intentionally or unintentionally) seemingly contradictory nonverbal messages that increase uncertainty.

One way the meta-communicative aspect of nonverbal behavior can aid the development and maintenance of personal relationships is by allowing people to express what they can't—or shouldn't—express verbally (Burgoon, Buller, & Woodall, 1996). For example, norms of politeness in many situations dictate that one should not verbalize one's true thoughts or feelings, but should instead mask them in the service of politeness. In some situations, however, one's genuine thoughts or feelings can be conveyed nonverbally. Suppose, for instance, that Kathy wants to know if she has chosen the right outfit for a party, so she asks her best friend Tammy in mixed company. To avoid embarrassing Kathy and causing her to lose face in front of others, Tammy says "I think you look terrific." Meanwhile, however, she is conveying to Kathy with her eyes and her facial expression that she actually dislikes the outfit and recommends changing. This transmission of meaning occurs outside of the awareness of the other guests (who have only paid attention to Tammy's words), but because Kathy and Tammy are such close friends, Kathy recognizes and acknowledges the message Tammy is conveying nonverbally and opts for a different outfit. Using her nonverbal behaviors, then, Tammy is able to be honest with her friend while simultaneously observing norms of politeness and helping Kathy save face.

## DEFINING NONVERBAL COMMUNICATION

So far we have been discussing the term *nonverbal communication* as if it is a readily understood and easily defined concept. In actuality, nonverbal communication has been defined various ways by different scholars. The most common definition found in undergraduate textbooks is that nonverbal communication comprises all behaviors that are not words. However, some scholars have contended that such a definition is too broad, leading them to define nonverbal communication more narrowly. For example, Burgoon, Buller, and Woodall (1996) conceptualized nonverbal communication as a subset of nonverbal behavior. Andersen (1999) argued that analogic processing distinguishes nonverbal communication from verbal com-

munication. Rather than defining nonverbal communication directly, other scholars have instead focused on the codes that are studied under the rubric of nonverbal communication. These three conceptualizations are discussed next.

### **Communication Versus Behavior**

Burgoon, Buller, and Woodall (1996) defined communication as “a *dynamic and ongoing process* whereby *senders* and *receivers* exchange *messages*” (p. 10), with nonverbal communication including “messages that people exchange beyond the words themselves” (p. 3). According to Burgoon and colleagues, however, not all behavior qualifies as communication. Rather, communication is a subset of behavior, with behavior defined as “any actions or reactions performed by an organism” (1996, p. 11, emphasis deleted). For communication to occur, encoding or decoding must take place. Thus, behaviors that are emitted when someone is alone are not communicative. Routine behaviors, such as eating and sleeping, as well as certain biologically based behaviors, such as breathing, are classified as behavior rather than communication unless people alter them in some way.

Hecht, DeVito, and Guerrero (1999) gave the example of blinking to illustrate the difference between behavior and communication. When people blink normally, they do so in an unconscious manner and interactional partners are unlikely to even notice such behavior. However, if a person blinks rapidly to hold back tears, receivers are more likely to attribute meaning to the blinking behavior. Moreover, the sender would probably not try to hold back tears if receivers were not present. Thus, in this context, rapid blinking would constitute communication. Blinking would also be considered communication when used as a flirtatious cue to signal attraction. As this example shows, the same behavior can be classified differently depending on the extent to which it deviates from normal behavior, is directed toward others, and is decoded by others.

Burgoon and her colleagues also noted that nonverbal behaviors vary in terms of their communication potential. Consistent with their idea that communication reflects a dynamic and ongoing process, they defined active nonverbal cues (such as gestures, touch, and vocal tone) as high in communication potential. These cues change during interaction and are part of the series of moves and countermoves that characterize many communication episodes. Other nonverbal cues (such as physical appearance, wall color, and furniture arrangement) tend to be static during a given interaction. Such cues contribute to perceptions and impressions, but they are not exchanged in the same way as more dynamic cues are.

## Analogic Versus Digital Processing

Rather than defining nonverbal messages in terms of channel, Andersen conceptualized nonverbal communication as cues that are processed analogically instead of digitally. As Andersen (1999) put it, “Nonverbal messages include all communication that is *analogic, nonlinguistic*, and typically *governed by the right brain hemisphere*” (p. 3). In contrast, Andersen defined verbal communication as digital, linguistic, and governed by the left brain hemisphere. Similarly, Gudykunst, Ting-Toomey, and Chua (1988) argued that “While verbal communication is a digital communication process, nonverbal communication is a multilayered, multimodal, multidimensional, analogic process” (p. 118). Analogical processing involves decoding behavior holistically, whereas digital processing involves identifying and assigning meaning to separate units of behavior. Think about a child learning the alphabet. Often children begin by singing their ABCs. Although they know the song, they may not know the individual letters. For example, many toddlers can sing LMNOP but they do not realize that this sound is actually composed of five letters. This is because they have processed the alphabet analogically rather than digitally.

Andersen also distinguished analogic messages from digital messages based on the relationship between the code (e.g., a behavior or word) and the referent (e.g., the meaning of that code or word). Analogic codes have nonarbitrary relationships with their referents. Some analogic codes are intrinsic, which means that the code and the referent are very closely related or are the same thing, whereas other analogic codes are iconic, which means that the code and the referent resemble one another (Ekman & Friesen, 1969b). Biologically based symptoms, such as blushing when embarrassed, crying when sad, or shaking when nervous are intrinsic codes that represent an individual’s internal state. Other intrinsic codes carry implicit meaning such that the behavior itself constitutes the referent. For example, forms of touch such as hitting or kissing stand for themselves as well as for deeper meanings (e.g., affection, hostility). With iconic codes, there is more distance between the behavior and the referent, although there is a resemblance between the two. Saying “I’ve had it up to here” while pointing to one’s forehead, telling someone to “come here” or “sit closer” by patting a place on a couch, pointing to indicate direction, or tracing a figure or motion in the air are all examples of iconic codes. Onomatopoeic words such as *buzz*, *swish* and *sweep* also resemble their referents and may be processed analogically rather than digitally.

The vast majority of words, however, are symbolic rather than iconic or intrinsic (Ekman & Friesen, 1969b). “Language is an arbitrary, indirect system that is symbolic. Symbols . . . bear no natural relationship to the things they represent” (Andersen, 1999, p. 6). Think about the word *tree*. People

could have come up with any word (i.e., *higgly, jova*) to represent a tree. The meaning is not in the word itself, but in what the word represents. Indeed, people who speak different languages use various words to refer to what English speakers call *trees*. Although words provide one of the clearest examples of symbolic codes, Andersen (1999) argued that certain behaviors are also symbolic and, therefore, processed digitally. Emblems, such as the okay gesture used in the U.S., can be substituted for words. Such a gesture also has a variety of meanings across cultures. In Japan, the same gesture means money. In other areas of the world, the gesture is considered obscene. Interestingly, many emblematic gestures have iconic origins. The finger position of the okay gesture resembles the letters O and K (consistent with the U.S. meaning), the outline of a coin (consistent with the Japanese meaning), and certain body parts (consistent with the interpretation of the gesture as obscene). However, Andersen (1999) argued that because such gestures are culturally defined and digitally processed, they are symbolic and do not count as nonverbal communication.

To further clarify the distinction between nonverbal and linguistic communication, Andersen (1999) gave the following examples. Linguistic messages include emblems, American Sign Language, lip reading, speech, language, Braille, musical notation, keep out or welcome signs, t-shirt slogans, subtitles, and letters. Nonverbal messages, on the other hand, include adaptors, illustrators, spontaneous facial expressions, vocalic features (e.g., tone of voice, pitch, speaking rate), hugs, pats, singing, melody, interpersonal distance, style of dress, physical attributes (e.g., height, eye color), shapes, environmental features (e.g., wall color, furniture arrangement), pictures, and video images. These lists are not comprehensive. Nonetheless, they illustrate some of the differences between Andersen's approach and other scholars' definitions of nonverbal communication (e.g., Burgoon, Buller, & Woodall, 1996; Leathers, 1997). Specifically, Andersen excludes emblematic gestures while including some static features (such as eye color) as well as some biologically based behaviors (such a pupil dilation) that are processed analogically.

## **Nonverbal Codes**

Some scholars prefer not to define nonverbal communication directly. Instead, they focus on what is included within the study of nonverbal communication. For example, in interviews conducted at an annual conference of the National Communication Association, scholars such as Valerie Manusov and Maureen Keeley explained that rather than trying to define the term nonverbal communication in a sentence or two, they describe the various codes of nonverbal messages, such as kinesics, proxemics, haptics, and chronemics. Similarly, Leathers (1997) conceptualized nonverbal communi-

cation in terms of “three major interacting systems: the *visual communication system*, the *auditory communication system*, and the *invisible communication system*” (p. 13).

According to Leathers (1997), the visual communication system tends to produce the most shared meaning within face-to-face interaction. This system includes kinesics (e.g., body movement, gestures, eye behavior, and facial expression), proxemics (e.g., space, distance, and territory), and artifacts (e.g., physical appearance, clothing, adornment such as jewelry or briefcases). Because these cues are readily seen during interpersonal interaction, Leathers contended that it is difficult to find situations wherein none of these codes would be interpreted as meaningful when two people are conversing.

The auditory communication system comprises what other scholars (e.g., Andersen, 1999; Burgoon et al., 1996) have called vocalics or paralinguistics. Leathers (1997) identified nine vocal attributes that give voices “their distinctive quality: loudness, pitch, rate, duration, quality, regularity, articulation, pronunciation, and silence” (p. 13). He argued that vocal characteristics are sometimes unconsciously produced or leaked, such as when a person’s voice spontaneously conveys nervousness or excitement. Other times, vocal characteristics can be altered or exaggerated (e.g., trying to sound warm when apologizing to someone). According to Leathers, vocalics primarily serve three communicative functions: to express emotion, to project positive impressions, and to regulate or manage communication.

Finally, Leathers included tactile, olfactory, and chronemic communication as part of the invisible communication system. Leathers noted that the olfactory (smell-related) and chronemic (time-related) codes do indeed tend to be invisible. Perfume may have an effect on people’s perceptions and communication even though they do not see it. Similarly, although people may become angry when their spouse shows up late for an important dinner party, the idea of lateness is an abstract concept, as is the construct of time itself. In contrast, tactile communication (touch) is obviously visible. However, Leathers (1997) believed that touch is processed differently than the visual codes of kinesics, proxemics, and artifacts. Specifically, he stated that “tactile messages can, and often do, communicate powerful meanings in the absence of any illumination and that the decoder of tactile messages relies on cutaneous receptors rather than eyesight to decode them” (p. 13).

Other scholars have included environmental features as a code of non-verbal communication (Andersen, 1999; Burgoon et al., 1996). For example, Knapp and Hall (2002) discussed natural environmental features, architectural design, and movable objects in their summary of the effects of the environment on communication. Natural environmental features include weather, seasons, the temperature, differences between urban and rural



settings, and geographic features (such as the presence of mountains or the ocean). Architectural features, which Hall (1966) referred to as fixed feature aspects of the environment, include those characteristics that are difficult to change. The size and shape of a room, for example, may affect people's moods, as might the layout of an office building or the high or low ceilings found in one's home. Movable objects within an environment, which Hall (1966) referred to as semifixed features, include changeable elements such as wall color, sound, temperature, artifacts (e.g., artwork or flowers), and furniture, as well as the arrangement of artifacts and furniture.

## **PERSPECTIVES ON WHAT COUNTS AS COMMUNICATION**

In addition to offering different definitions for nonverbal communication, scholars have offered various perspectives that delineate what should (and should not) be regarded as communication. Three of the most popular perspectives are the source, receiver, and message orientations, all of which address the larger question of whether one cannot not communicate (see Bavelas, 1990). Each perspective has important implications for what counts as communication, and therefore, what counts as nonverbal communication. We also describe our position on this debate, along with our definition of nonverbal communication, as a process-based perspective.

### **The Source Orientation**

The source orientation privileges the role of the sender within the communication process. Behaviors that are performed intentionally or are directed toward others are considered communication; behaviors that are purely spontaneous or are biologically based symptoms of one's internal states are not (Motley, 1990). Thus, if a person yawns in response to being tired, the yawn would not be classified as communication. However, if a person exaggerates, fakes, or tries to stifle a yawn, such other-directed behaviors would be deemed communication. Motley made this distinction based on his acceptance of four postulates: (1) communication involves symbolic behavior, (2) communication necessitates encoding, (3) communication is an interactive process between senders and receivers, and (4) communication varies in terms of quality or fidelity, with the highest quality achieved when a receiver interprets a message consistent with the sender's intent. Motley argued that encoding does not require a consciously strategic decision to enact a certain behavior to reach a particular goal. Instead, the minimum requirement is that a sender directs a behavior toward a receiver, regardless of how cognizant the sender is of his or her



specific goals. According to this view, verbal messages count as communication (as long as a receiver attends to them—either intentionally or unintentionally) because they are almost always symbolic and directed toward others. Nonverbal behaviors that are biologically based or purely symptomatic (e.g., stomach growling, spontaneous facial expression) would not count as communication. Nonverbal behaviors that are other-directed (e.g., putting hands on stomach and laughing after one's stomach growls, smiling to show liking or friendliness) would count as communication.

### **The Receiver Orientation**

The process of interpreting or decoding behavior is privileged in the receiver perspective. Behaviors are considered to be communicative as long as a receiver attaches meaning to them (Andersen, 1991). Thus, in contrast to the source orientation, symptomatic behaviors count as communication as long as they are interpreted by someone. Andersen proposed the receiver orientation based on three assumptions. First, communication requires at least two people, so communication cannot occur when a person is alone. Second, for communication to occur, a sender must perform behavior. Notice that Andersen focuses on simple performance rather than specifying that behavior must be intentional or directed toward others. Third, communication does not occur unless a receiver perceives behavior. Andersen (1991) also presented counterarguments for each of the postulates Motley (1990) advanced. Specifically, he argued that not all communication is symbolic, that performing rather than encoding a behavior is a necessary component of communication, that although communication is interactive it does not always require two-way sending, and that while fidelity is an important characteristic of communication, it is not a requirement. Like Motley, Andersen includes verbal communication and other-directed nonverbal messages as communication. In addition, however, Andersen also considers that symptomatic and spontaneous nonverbal messages count as communication, as long as they are interpreted by a receiver. Thus, if Tim walked in and smiled after seeing Jessica laugh while watching a television show, Andersen would classify Jessica's laugh as communication even if she didn't know Tim entered the room. Tim's smile would only count as communication if Jessica noticed it and attached meaning to it.

### **The Message Orientation**

The third perspective, the message orientation (Burgoon, 1980), privileges the characteristics of behavior over either the sender or the receiver. According to this perspective, behaviors are communicative when they meet at least one of the following criteria: (a) they are usually sent with intent,

(b) they are usually interpreted as intentional, or (c) they are regularly used and have consensual, shared meaning within a particular relationship, group, or culture. Burgoon et al. (1996) noted that behaviors do not have to be intentionally sent or interpreted as intentional every time they are used to qualify as communication. However, if a behavior is usually regarded as intentional, people are likely to interpret it as such. Similarly, behaviors that have consensual, commonly understood meanings count as communication even when they are misinterpreted. For example, imagine that Sarah smiles while sitting next to Jeff and daydreaming about something completely unrelated to him. Jeff then mistakenly interprets her smile as conveying pleasure that they are together. Under the message perspective, even though Sarah's smile was misinterpreted, it would count as communication because smiles generally convey pleasure and happiness. This example also illustrates that spontaneous expressions and symptomatic behavior can be regarded as communication, as long as they commonly have socially shared meaning. If someone fidgets and has a tense facial expression, senders are likely to interpret such behavior as reflecting nervousness even if the receiver did not mean to send such a message. By contrast, idiosyncratic messages that are difficult to decode would not qualify as communication (e.g., Sarah's voice tends to get quiet and low-pitched when asking a question; Jeff wears mismatched socks). Such idiosyncratic behaviors would lack socially shared meanings and would not be generalizable.

### **A Process-Based Perspective**

We believe that both encoding and decoding are important parts of the communication process. Discounting either the sender or the receiver would provide an incomplete picture of the communication that occurs between relational partners. We also believe that the exchange of messages is at the heart of the communication process. Thus, we define nonverbal communication as nonlinguistic messages that people exchange in interactive contexts. Like Burgoon (1980), we define messages as behaviors that typically have social meanings within a given context. These messages can be symptomatic or spontaneous as long as people usually attach meaning to them. Like Andersen (1991), we do not discount messages that are performed rather than intentional or other-directed. In contrast to Andersen (1999), we include emblems as a form of nonverbal communication because such gestures frequently have iconic features and origins. Finally, we concur with the position of Burgoon, Buller, and Woodall (1996) regarding communication potential. To the extent that behaviors are a dynamic rather than static part of the communication process, we see them as having greater communication potential. For example, physical appearance cues are often powerful predictors of person perceptions (see chap. 3, this volume), but because these cues are less dynamic than kinesic or vocalic cues,

we would argue that they possess less communication potential. In other words, these static cues affect perceptions and communication, but they do not impact the communication process in a dynamic, ongoing fashion.

Within our process-oriented perspective, three types of outcomes provide the best examples of communication: successful communication, miscommunication, and accidental communication (see Fig. 1.1). These three forms of communication satisfy our criterion that there is an exchange of messages; in all these cases a sender performs a behavior (either intentionally or unintentionally) and a sender interprets that behavior. Moreover, the behaviors exchanged in these three situations are likely to have fairly clear social meanings. Successful communication provides the highest level of fidelity, with a receiver interpreting a sender's message accurately. For example, a mother, Sandra, might frown and speak in an angry voice—two other-directed behaviors—when her 5-year-old son, Brandon, uses a 4-letter word. Brandon might then correctly interpret his mother's nonverbal communication as showing disapproval. In this case, the message has been exchanged successfully. When behaviors have consensual social meanings, it is much more likely that high fidelity communication such as this will occur. Accidental communication is also likely to involve messages with common social meanings; this is why they are interpreted correctly even though they were sent unintentionally. Imagine that Sandra can't help herself from smiling initially when she hears Brandon use a 4-letter word for the first time. Sandra's smile is spontaneous and unintentional, yet Brandon sees it and concludes that his mom thought it was funny. Brandon's interpretation is correct even though Sandra might have preferred that he did not know she was amused by his word choice.

While accidental communication is likely to involve the interpretation of behaviors that have common social meanings, miscommunication is likely

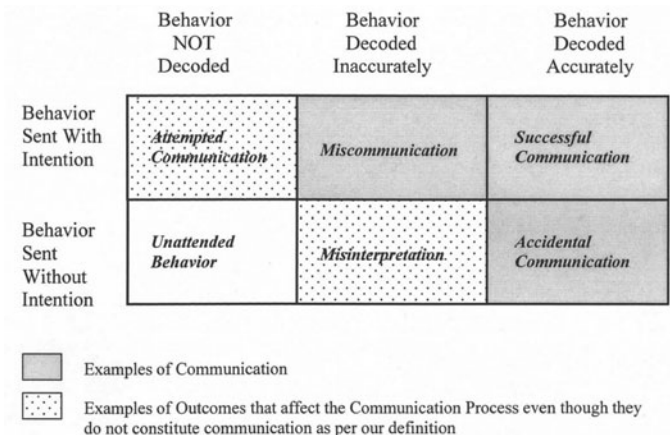


FIG. 1.1. Matrix of outcomes following the enactment of nonverbal behavior.

to involve the sending of behaviors that have common social meanings. This is because miscommunication occurs when a sender intentionally encodes a message. Presumably then, the sender will use a behavior that has a common social meaning. Imagine, for example, that upon seeing his mother smile Brandon smiles back as a way of communicating liking and friendliness, as well as relief that his mother found his use of an obscenity funny. Sandra, however, interprets Brandon's smile as smug and defiant, and tells him "that's not funny, young man." Even though Brandon tried to send a message of liking and friendliness using a behavior that commonly reflects such sentiments, miscommunication ultimately occurred. Of course, sometimes miscommunication involves senders who are unskilled and make poor choices when encoding messages. Nonetheless, we believe that miscommunication is clearly a form of communication since active encoding and decoding take place.

Two other types of outcomes—attempted communication and misinterpretation—are not as clearly communicative, though we believe they should be studied as part of the communication process. Attempted communication occurs when one person directs a message toward someone, but the intended receiver does not attend to the message. For instance, Bob might act standoffish by showing low levels of nonverbal involvement (e.g., little eye contact, indirect body orientation, and neutral facial expression) with the hope that his girlfriend, Stephanie, will see his body language and figure out that something is wrong. Stephanie, however, might be too involved in other activities to notice Bob's behavior. Clearly, this type of exchange has implications for the communication process as well as the relationship. Bob is likely to become frustrated if his attempts to telegraph a message to Stephanie continue to go unnoticed. Eventually, Bob might confront Stephanie in an angry manner, using her lack of attention to his communication attempts as evidence that she does not care enough for him. Thus, although attempted communication does not fulfill the requirement that there is an exchange between two people (because the intended receiver is uninvolved), such attempts have implications for the communication process as a whole.

Misinterpretation, in contrast, does fulfill the requirement that there is an exchange between two people. A sender performs a behavior and a receiver decodes that behavior albeit inaccurately. However, since the sender did not intentionally direct the behavior toward the receiver, and the receiver ends up decoding the behavior inaccurately, it is unlikely that the message exchanged in this instance has much consensual social meaning. For example, idiosyncratic behaviors are likely to be enacted without intention, and various receivers are likely to attach different meanings to such behavior. Other times, misinterpretation occurs when a receiver attaches the wrong meaning to a behavior that has no inherent meaning. As a case in point, Noller's research (see chap. 5, this volume) has demonstrated that people in distressed marital relationships tend to interpret neutral vo-

cal tones as expressing negative emotion. This misinterpretation is then likely to lead to a negative communicative exchange between spouses. Thus, we believe that it is important to examine instances of misinterpretation as part of the communication process even though we do not regard misinterpretation as a form of communication. Put another way, misinterpretation has the power to affect communication outcomes even though we would classify it as perceptual rather than communicative.

Finally, in line with the sender, receiver, and message perspectives, we do not consider unattended behavior to be communication, nor do we consider it to be relevant to the communication process. Unattended behavior occurs when a person performs behavior without intention and without a receiver attaching any meaning to it. Biologically based behaviors such as normal blinking or one's stomach growling, as well as routine behaviors such as eating and sleeping, usually fit this category. In some instances, adaptors (e.g., scratching one's nose) and other body movements (e.g., stretching one's legs) also fit here. Such behaviors often go unnoticed within the communication process—both by the sender and the receiver—and therefore have no effect on outcomes.

To summarize, we take a process-oriented perspective that combines elements from Burgoon's (1980) message orientation and Andersen's (1991) receiver orientation. Within this perspective, we categorize behavior as communication when a message with socially shared meaning is exchanged between a sender and receiver. According to this definition, successful communication, accidental communication, and miscommunication provide good examples of communication, with these forms of communication varying in terms of fidelity (i.e., among these categories successful communication has the most fidelity whereas miscommunication has the least fidelity). This perspective differs from both Motley's (1990) sender orientation and Andersen's (1991) receiver orientation. Specifically, Motley would only include successful communication and miscommunication because he requires that messages are other-directed and decoded by a receiver. Andersen, on the other hand, would include successful communication, miscommunication, accidental communication, and misinterpretation because he counts instances where messages are interpreted, regardless of whether they were sent intentionally or have socially consensual meaning. Finally, although we do not view attempted communication and misinterpretation as exemplars of communication, we believe that the perceptions associated with these two situations impact the communication process and, ultimately, outcomes such as liking and relational satisfaction. Therefore, taking a process-oriented perspective necessitates studying attempted communication and misinterpretation but labeling them as factors that affect rather than constitute communication. True to this perspective, we examine processes related to everything but attended behavior within this book.

## AN OVERVIEW OF THE BOOK

Empirical research is never conducted in a vacuum, but is instead informed by assumptions and theoretic principles, whether explicitly or implicitly. We therefore begin our discussion of nonverbal communication in personal relationships in chapter 2 with a review of theories and frameworks. The chapter starts by explicating two foundational theoretic paradigms: the sociocultural paradigm and the bio-evolutionary paradigm. Each has been highly influential in the study of nonverbal communication and each subsumes multiple individual theories and models. Next, we introduce several specific theories that are frequently used in the study of nonverbal behavior. For each, we explicate the predictions and review empirical applications.

Chapters 3 through 8 are the content chapters, each of which focuses on a specific arena of nonverbal communication in personal relationships. Chapter 3 addresses the process of interpersonal attraction and the many ways in which nonverbal behavior both elicits attraction and conveys it. Chapter 4 focuses on the nonverbal communication of affection in personal relationships, highlighting multiple influences on its expression and the relational benefits associated with it.

In chapter 5, we discuss the experience and nonverbal expression of emotions in relational communication and the ways in which people learn to decode emotional expressions accurately. Chapter 6 addresses the nonverbal correlates of power and the many ways in which dominance is exercised in interpersonal interaction. Our focus in chapter 7 is on deception, the nonverbal behaviors that people exhibit when they deceive, and individual abilities to detect deception through nonverbal behaviors. Finally, in chapter 8, we discuss relational conflict as well as providing a brief overview of how nonverbal communication may function as relationships deescalate and eventually dissolve. We conclude in chapter 9 with a summary of the theoretic and practical implications for our understanding of nonverbal communication in personal relationships, and we discuss some important future directions for researchers in this area.

A unique aspect of the chapters is that they play host to an ongoing story of relational development. Our characters, David and Tina, meet each other at the beginning of chapter 3 as a result of their mutual attraction. Subsequent chapters follow the escalation, as well as the trials and tribulations, of their romantic relationship with each other. Although the storyline is advanced primarily at the beginning of each chapter, it is woven throughout the chapters as examples of the nonverbal communication principles being addressed. We hope that this ongoing storyline will help to illuminate some of the issues raised in the content chapters.

To make the storyline clear, we begin here by providing contextual information about its two principal characters. David, age 32, is vice principal of

the high school in the small town where he grew up. He was raised almost entirely by his mother, who worked two jobs while David and his brother Chris were in school. Chris, who has been developmentally disabled since birth, now lives in a facility three hours away, so David rarely sees him. David's primary social network consists of a small but close-knit group of friends, most of whom he has known since kindergarten. Since small-town life doesn't afford him many opportunities to meet women, David regularly goes with his friends to clubs and bars in the larger neighboring city. David has dated off and on for the past several years but feels he has yet to find the right person.

Tina, age 35, is about to be promoted to vice president of the bank where she has worked since college. She grew up in the city, the eldest child and only daughter of two prominent physicians who encouraged all seven of their children to excel academically. While earning her MBA she was briefly engaged to a law student whom she met through her mother. He was the son of longtime friends of Tina's parents, but although Tina enjoyed his company, she did not genuinely love him so she called off the engagement. Since then, she has focused primarily on her career, often working late into the evening to get ahead. She enjoys her job and her friends from work, but is beginning to feel that there must be more to life.

## Major Paradigms and Theories of Nonverbal Communication

*When David and Tina first meet, they bring a host of expectations, preferences, behavioral tendencies, and past experiences to their initial interaction. Some of their perceptions and actions are rooted in biology and evolution; others have been shaped by their social and cultural environments. Biology and environmental forces have also interacted to make them the people they are today. As they get to know one another, their relationship will provide another source for modifying their perceptions and behaviors, including their nonverbal communication. Tina may learn to expect David to be talkative and emotionally expressive when at social functions, so she would be surprised if he sat alone quietly in a corner. Tina may also notice that she has become more outgoing in social situations as a function of being around David. As their relationship progresses, they will learn more about how their communication styles interact.*

Scholars have long debated whether biology or the environment are more influential in predicting human behavior. Consistent with our description of the factors affecting Tina and David's initial interaction, we take the position that both biology and the environment are critical in understanding nonverbal communication and relationships. Moreover, several theories explaining the exchange of nonverbal communication implicate biology, social learning, or both in their predictions. These theories help explain how Tina and David will react nonverbally to each other based on the expectations, attitudes, perceptions, and emotions they experience at different points in their relationship.

To provide a broad framework for discussing nonverbal communication in relationships, this chapter first explicates the assumptions of the bio-



evolutionary and sociocultural paradigms, using examples from the nonverbal literature to illustrate their application. Further along in this chapter, we will indicate how the assumptions of these two paradigms inform numerous contemporary theories relevant to the exchange of nonverbal communication. First, we turn to a discussion of the bio-evolutionary paradigm.

## THE BIO-EVOLUTIONARY PARADIGM

Why are some nonverbal expressions of emotion encoded and decoded similarly across cultures (Fridlund, 1994)? Why are certain facial features universally attractive (Etkoff, 1999)? And why do parents around the world use a similar type of baby talk when communicating with their infants (Grieser & Kuhl, 1988). The bio-evolutionary paradigm helps answer these and other questions by explaining how and why patterns of human behavior have evolved over the millennium. Of course, evolutionary theories were not developed for the purpose of explaining and predicting communicative behavior. Instead, the study of evolution has been aimed at understanding how characteristics of species change and develop over time; this line of theoretic work has only recently been applied to the understanding of relational communication, as well as nonverbal behavior, through the field of evolutionary psychology.

### Evolution Through Natural Selection and Differential Reproduction

Despite references to the *Theory of Evolution*, there actually is no such theory. Instead, several theories related to the evolution of species and the cognitive, emotional, and behavioral motivations that accompany evolutionary processes fall under the sociobiological paradigm. In this context, *evolution* refers to changes observed over time in the physical characteristics of organisms; thus, gradual changes in the wingspans of condors, the spotting patterns of leopards, or the average height of adult humans would all be examples of evolution. Many erroneously credit Charles Darwin with the discovery of evolution when, in fact, scientists had been studying the evolutionary process for many decades prior to his contributions. (Darwin's grandfather, Erasmus Darwin, was also an evolutionist and Darwin's own work was an expansion of Thomas Malthus's *Essay on the Principle of Population*, first published in 1798; see Malthus, 1894). The younger Darwin's celebrated contribution (Darwin, 1859) was an explanation for how the process of evolution works, which he offered in his *theory of natural selection* (an explanation that was independently, and simultaneously, proposed by Alfred Russel Wallace, 1858).

The theory of natural selection (TNS) espouses that, within the struggle to survive, certain members of a species will be advantaged over others as a result of their particular combination of traits. Which traits are advantageous depends on the organism's specific survival challenges. In some species, size and strength are advantages; in others, the ability to camouflage oneself is what keeps one alive. Among humans, one might similarly argue that intelligence, physical attractiveness, or access to financial resources are all traits that advantage certain individuals over others in terms of their ability to survive—and, consequently, in terms of opportunity to procreate. Darwin (1859) distinguished between traits related to survival and those related to reproductive fitness. He argued that some characteristics evolve because they are related to the ability to attract mates and reproduce rather than simply to survive.

Scholars subscribing to TNS recognize that some advantageous traits are heritable, meaning that they are passed on from parent to offspring genetically (instead of through learning or social inheritance). With humans, for example, intelligence and physical attractiveness are heritable, whereas access to financial resources is not (even though financial status does get passed on from parent to child, it is not transferred genetically). Evolutionary theorists argue that, because members of a species with advantageous traits are more likely than other members to survive and attract mates, they are also likely to produce more offspring, who will consequently inherit those traits. As a result, the advantageous traits will appear with greater frequency in succeeding generations than will the traits of those members who produced fewer offspring. The net result, according to TNS, is that advantageous traits get selected for through the greater reproductive opportunity afforded their bearers, whereas disadvantageous traits get selected against, perhaps eventually disappearing from the population altogether. A trait need only be partially heritable to be affected by natural selection. Few would argue that physical attractiveness is, at least, partly genetic; when attractive adults mate, they tend to produce attractive children. However, attractiveness is also affected by nutrition, exercise, cosmetic use, illness, and perhaps a host of other environmental influences.

Extensions of TNS also suggest that traits do not have to be passed on from parent to child for natural selection to occur. Based on work in biology demonstrating how genetic information is passed from one generation to another, scholars developed inclusive fitness theory (Hamilton, 1964; Williams, 1966). Hamilton argued that natural selection is related to genetic inheritance. According to inclusive fitness theory, because people within the same family share genes, the reproductive success of genetic relatives promotes natural selection. For example, siblings share approximately 50% of their genes, so ensuring the survival of a brother or sister (as well as their offspring) increases the possibility of genetic inheritance. Thus, both direct

offspring reproduction and the reproductive success of genetic relatives contributes to the natural selection of certain genes. Inclusive fitness theory marked a fundamental change in how biologists and social evolutionary theorists thought about the process of evolution; instead of focusing on an individual as a carrier of traits, theorists could focus on the broader issue of genetic inheritance (Buss, 1999; Simpson & Gangestad, 2001). Such a perspective allows researchers to consider how behaviors related to the protection of one's genetic relatives, rather than one's own survival and reproduction, lead to natural selection.

### **Evolved Preferences and Behaviors**

Researchers in the field of evolutionary psychology have capitalized on Darwin's theory to explain numerous aspects of human emotion, cognition, and interpersonal behavior (for review, see Buss, 1999). Their work is founded on the argument that the mind, or psyche, is not an entity separate from the individual but is, instead, a product of the brain. Because the brain is a physical organ, it should thus be no less subject to natural selection than the eyes, arms, or feet. Consequently, evolutionary psychologists argue that the mind should be shaped by evolutionary pressures just as much as the body is. Evolutionary psychology focuses, therefore, on those aspects of thought, perception, emotion, and even interpersonal interaction that advantage people with respect to survival and procreation.

Research and theory suggests that evolution explains human behavior related to a myriad of preferences and behaviors. For example, people likely developed a preference for sweet and fatty foods because our ancestors needed to consume a large number of calories from a limited number of sources to have the energy needed to survive. (Of course, this adaptation is not as beneficial in industrial countries in the twenty-first century where food is abundant and high levels of fat and carbohydrates can lead to obesity.) In the social arena, evolutionary psychologists suggest that natural selection has shaped behaviors related to social affiliation, attachment, altruism, dominance, and sexuality.

In terms of social affiliation, our ancestors worked in groups to accomplish goals, such as hunting and gathering food, providing shelter, and protecting each other from danger. Such teamwork was related to natural selection, in that species whose members worked in cooperative groups were more likely to survive and reproduce (Dugatkin, 1997). Individuals who were highly valued by the group may have been most likely to be protected and to be given their share of resources. Thus, nonverbal behaviors related to liking and cooperation, including smiling and touch, may have evolved as key ways of connecting with group members.

Behaviors related to attachment go a step further by focusing on an emotional bond with a specific individual rather than the social group as a whole. From an evolutionary perspective, emotional bonding is critical for the successful rearing of offspring. Infants cannot survive on their own; they need the attention and care of an attachment figure (usually the mother). Our ancestors also had a better chance of surviving when their parents were bonded to one another; children with two parents caring for them usually received more resources, both in terms of tangible commodities such as food and shelter, and less concrete benefits such as love and attention. Nonverbal behaviors aid in the establishment of attachment between parents and children as well as mates. For example, cute baby faces, smiles, and coos lead to more affection from caregivers (Andersen, 1999; Langlois, Ritter, Casey, & Swain, 1995).

Touch also plays a critical role in the formation of attachments in humans and other primates. In primates, a series of famous studies by Harlow and his colleagues demonstrated that contact comfort is a primary need for infant monkeys (Harlow, 1958; Harlow, Harlow, & Hansen, 1963; Harlow & Zimmerman, 1958). In these studies baby monkeys spent up to 18 hours a day clinging to warm terrycloth-covered surrogate mothers while only visiting hard wire mesh mothers equipped with food when they were hungry. Harlow concluded that touch and warmth are critical for emotional security in primates. Research on humans also suggests that touch between infants and caregivers is a critical ingredient in the recipe for healthy social and emotional development. In the nineteenth and early twentieth centuries, children in overcrowded orphanages and hospitals received adequate food but were seldom touched. As a result, many of these children became depressed and nonresponsive, some would sit rocking back and forth in a daze for hours, and others bit themselves or banged their heads against their cribs. These children were also more susceptible to illness. In fact, Spitz (1945) summarized statistical evidence from various orphanages throughout the world and came to similar conclusions: Infants who were not touched tended to die before their first birthdays or to develop psychological problems, but those who were cuddled frequently tended to thrive. Touch, then, seems to be related to basic survival as well as the formation of quality attachments.

When people share a strong attachment, they are likely to invest in the relationship and make sacrifices for one another. For instance, a parent may be willing to sacrifice her or himself for the sake of a child. Such a sacrifice is consistent with principles from evolutionary theory since the survival of one's child is critical if traits are to be passed on to the next generation. A similar logic explains why people show more affection to their own children than to other people's children (Floyd & Morman, 2001); such preferential treatment reflects an inborn motivation to invest more in those

who carry one's genes than in those who do not. For example, in their *theory of discriminative parental solicitude*, Daly and Wilson (1983, 1985, 1995, 1996) explain that indiscriminate investment of resources is maladaptive and that parents are conditioned through evolutionary pressures to give more in the way of physical, emotional, social, and financial resources to their biological offspring than to the biological offspring of others because such a strategy will provide the best return, with respect to evolutionary success, on their investments. Daly and Wilson do not propose that people behave in this way consciously. In fact, people may provide entirely different attributions for their behaviors, with the motivation to maximize evolutionary success operating outside of conscious awareness.

Investing in people other than biological offspring can also yield returns in terms of survival and evolutionary success. Cunningham (1985) suggested that people engage in altruistic behavior with relatives because, as inclusive fitness theory suggests, people have an innate tendency to promote the survival of those with whom they share genetic material. However, altruistic behavior is not reserved for kin. Researchers taking both evolutionary and social exchange perspectives have suggested that individuals sometimes engage in altruistic behavior because they expect reciprocity; in other words, if they do something unselfish for someone, they expect that the recipient of their altruistic behavior will do something unselfish for them in the future (Alexander, 1979; Trivers, 1971; Wilson, 1975). Such altruistic reciprocity is most likely in established relationships because there are more opportunities for the favor to be returned in the future. In addition, people may be most likely to engage in altruistic behaviors when they believe the recipient has the resources and power to reciprocate at a level equal or greater than their own sacrifice.

Of course, evolutionary processes do not uniformly favor prosocial behaviors such as affiliation, attachment, and altruism. Sometimes competition for resources occurs within groups or dyads, leading to antisocial behavior. As Dillard (1998) put it, "Scarce resources, ranging from food to breeding opportunities, must be allocated among members of a group. . . . A status hierarchy is one means of resolving the distribution of resources problem" (p. xxii). Within groups people can enhance or maintain their positions using various dominance displays. As discussed in chapter 6, dominance can be communicated through either socially skilled behavior (e.g., social influence, dynamism) or aggressive behavior (e.g., intimidation, threats). For example, people with high social status often exhibit a more pleasant or dynamic communication style than less popular individuals. People also compete for resources by engaging in competitive behaviors such as standing over someone, using a threatening stare, or invading another person's territory (see chap. 6, this volume).

Researchers have argued that many nonverbal displays of dominance used by humans (Keating, 1985) and other primates (Mitchell & Maple, 1985) are rooted in evolution. Burgoon, Buller, and Woodall (1996) summarized this line of research as follows:

The similarity between many human kinesic displays of dominance and submission and those of our primate cousins has led to speculation that such behaviors share a common evolutionary origin. Although the variability and complexity of dominance patterns among monkeys and apes argues against direct comparisons to humans . . . , there are enough analogues to support a sociobiological interpretation of such behaviors. This is another way of saying that many of the behaviors have universal meaning for humans. (312)

A variety of dominance displays appear to carry universal meaning and to be found across different species and cultures. For instance, many animals establish and protect territory as a way of communicating dominance, and primates show similarity in kinesic behavior related to anger (e.g., a threatening stare, tense body positioning enabling one to attack) and fear (e.g., an open mouth, tense body positioning enabling one to fight or flee), as well as other emotions (e.g., Chevalier-Skolnikoff, 1973; Ellsworth, Carlsmith, & Henson, 1972; Mitchell & Maple, 1985). Based on his research of children from different cultures, Eibl-Eibesfeldt (1987, 1989) concluded that sequences of dominant behavior (as well as affiliative behavior) have phylogenetic roots and are guided by a system of universal rules that help structure social interaction. Furthermore, Eibl-Eibesfeldt argued that even though there is cultural variability based on environmental influences and socialization, there is also considerable similarity across cultures.

Consistent with Eibl-Eibesfeldt (1987), communication researchers have argued that among several different relational themes, affiliation (or intimacy) and dominance are the two primary dimensions underlying nonverbal communication (e.g., Burgoon & Hale, 1984, 1987; Dillard & Solomon, 2004). Indeed, some aspects of nonverbal communication can be explained using the evolutionary reasoning that certain behaviors evolved as strategies related to affiliation or attachment, whereas others evolved as strategies related to dominance or protection of self. The fact that normative levels of personal space vary with the intimacy of a relationship (Burgoon, 1978), for instance, could be explained with reference to the protective aspects of relationships and the relative threats of interacting with unfamiliar others. In human evolutionary history, it may have provided an adaptive advantage to keep one's intimates physically close while maintaining greater distances from strangers, who may pose a physical threat. If so,

then those who enforced such a distinction would have, in the long run, had greater evolutionary success than those who were less discriminating.

Finally, behaviors related to sexuality and mate selection have been connected to the evolutionary perspective, as have dominant behaviors studied in relation to intrasexual competition (Belske & Shackelford, 2001; Buss, 1984, 1989, 2000; Scheib, 2001; Schmitt, Shackelford, Duntley, Tooke & Buss, 2001; Trost & Alberts, 1998). Many scholars investigating these issues have utilized Trivers (1972) *parental investment model* as a framework for making predictions regarding mate selection. According to Trivers, people's choices regarding mates are driven, albeit unconsciously, by the different parental investments that men and women have made over the ages.

Compared to men, women invest more biological and emotional resources into their children. They invest their bodies through pregnancy and breastfeeding, and they invest considerable time, energy, and emotion into raising children. To maximize the success of these investments, evolutionary theorists such as Trivers have argued that it was adaptive for women to select mates who could contribute good genetic material and would be able and willing to provide resources to their offspring (e.g., food, protection). Thus, women should be highly selective when choosing sexual partners.

Men have a different set of adaptive concerns related to paternal uncertainty and intersexual competition (Trivers, 1972). Specifically, before the recent scientific advancements of genetic testing, a man could not be 100% sure that the baby a woman was carrying was his offspring. Therefore, to reduce the risk of investing resources into another man's child, it was especially adaptive for men to seek partners who would be sexually faithful. Trivers also theorized that men have experienced more intrasexual competition than women across the ages, leading them to engage in more aggressive behavior toward rivals. Increased sexual competition is theorized to be the result of women's greater selectivity in choosing mates combined with the biological fact that women can only be impregnated once every 10 months or so (or less often if breastfeeding blocks menstruation) compared to men's fast production and release of sperm.

Empirical research has produced evidence consistent with the notion that men and women have evolved different preferences and behaviors in relation to sexual attraction and mating. For instance, research has supported Trivers' contention, showing that women are highly selective when choosing partners across a variety of situations, including dating, one-night stands, and marriage. By contrast, men are less selective than women when choosing partners for one-night stands, although they become nearly as selective as women when choosing long-term relational partners, presumably because they will be required to make larger investments into long-term relationships (Clark & Hatfield, 1989; Kenrick, Sadalla, Groth, & Trost, 1990;



Mathes, King, Miller, & Reed, 2002). Research has also demonstrated that women are more attentive to characteristics such as financial resources, dominance, ambitiousness, and emotional fidelity than men (Buss, 1995; Kenrick et al., 1990; Kenrick & Trost, 1997; Li, Bailey, Kenrick, & Linsenmeier, 2002), whereas men are more attentive to physical attractiveness and sexual faithfulness (Buss, 1994; Fink, Grammer, & Thornhill, 2001; Li et al., 2002; Kenrick et al., 1990). Consistent with evolutionary assumptions, these sex differences have been found across a wide variety of cultures (Buss, Abbott, Angleitner, Asherian, & Biaggio, 1990). Furthermore, while the evolutionary mechanisms theorized to underlie these differences operate out of conscious thought, research suggests that people are aware that men and women are attracted to different qualities in prospective mates. For instance, Tooke and Camire (1991) showed that women deliberately enhance physical attractiveness when trying to attract mates, whereas men deliberately enhance signs of status.

Of course, some preferences transcend sex. For instance, even though men are more attentive to physical appearance than women, both men and women look for mates who appear outwardly healthy and fertile to maximize their chances for reproductive success. Body type is related to health, and at least in people's perceptions, to fertility. Across various cultures, men have reported a preference for women with hour-glass shaped figures and waist-to-hip ratios of approximately .70. (Buss, 1989, 1994; Furnham, Lavancy, & McClelland, 2001; Singh & Young, 1995). Preferences related to weight seem to vary by culture, with some cultures valuing thinness more than others. But across cultures, men find women who have a significantly smaller waist than hips attractive. Women, on the other hand, look for men with broad shoulders and a waist-to-hip ratio of about 1.0 (Asthana, 2000; Buss, 1989, 1994). These physical traits are related to the perception that a man is strong and healthy, which are necessary if the man will be able to contribute certain resources to the relationship. Both men and women have also been shown to value face and body symmetry, which are correlated to actual genetic fitness (Grammer & Thornhill, 1994; Perrett et al., 1999; Rhodes, Proffitt, Grady, & Sumich, 1998).

### **The Bio-Evolutionary Paradigm: Summary and Critique**

Four key assumptions guide the bio-evolutionary paradigm as related to nonverbal communication. (1) Heritable traits are passed on from generation to generation because they were related to survival and reproductive success. (2) Evolution helps explain human perceptions, preferences, and behaviors, including those related to affiliation, attachment, altruism, dominance, and sexuality. (3) Evolutionary processes help explain cross-cultural similarity in these perceptions, preferences, and behaviors. The bio-



evolutionary perspective does not discount the influence of environmental and cultural forces. These forces help shape what constitutes adaptive behavior. However, evolution is posited to be the foundational or ultimate explanation of behavior in contrast to the more proximal influences of culture and the environment. (4) Certain sex differences in nonverbal communication can be traced to evolutionary processes related to mating and reproductive fitness. As Andersen (1998b) claimed, "Because human beings have spent hundreds of thousands of years evolving as men and women, a fruitful place to search for the most stable differences in communication would be in behaviors most closely associated with reproductive roles" (p. 85).

Although some people have difficulty accepting the bio-evolutionary perspective because they see it as too deterministic (Andersen, 1998b), it is hard to deny that biology and evolution have an impact on nonverbal communication. Most people readily accept the fact that children inherit genes related to height, eye color, and health from their parents. Yet some people resist the idea that behavior can also be heritable. Nonetheless, children inherit genes related to temperament, intelligence, emotionality, and a host of other traits that affect behavioral displays. Evidence from studies showing cross-cultural similarity in emotional expression and other nonverbal behaviors (e.g., Eibl-Eibesfeldt, 1989; Fridlund, 1994) suggests that evolutionary processes have shaped human behavior across the millennium, as does research demonstrating that infants and young children learn to encode and decode certain kinesic and vocalic behaviors around the same time, regardless of culture (Oster & Ekman, 1978; see also Burgoon, Buller, & Woodall, 1996, for review). There are also common patterns of infant-adult interaction related to vocalizations, gaze, and movement across various cultures (Keller, Schoelmeirch, & Eibl-Eibesfeldt, 1988). Based on this evidence, Burgoon and her colleagues concluded that kinesic behavior is acquired "from innate neurological processes passed on genetically and developed through evolution," as well as "from experiences common to all humans as they interact with the environment" (p. 38). However, Burgoon and her colleagues also noted that social and cultural influences modify one's experiences and lead to differences in the development of nonverbal communication across different cultures, co-cultures, and individuals.

One of the key criticisms of the bio-evolutionary paradigm has been that genetics is privileged over the environment as an explanation for human behavior. The issue of nature versus nurture has been debated by scholars since the late 1700s. Evolutionary theorists have argued that their paradigm takes the environment into account. For instance, Simpson and Kenrick (1997) pointed out that culture and genetic evolution work together to provide the best predictions for human behavior. However, they also contended that cultural differences can be explained by evolutionary processes because

people from various cultures encountered special situational and environmental challenges that led them to develop unique adaptations, thereby privileging evolution as the ultimate explanation. For this reason, it is difficult to falsify evolutionary theories; if the expected difference or similarity does not emerge, one can surmise that the behavior was not adaptive for a particular group. It is also important to recognize that genetic characteristics that were adaptive in past generations may not always be adaptive today. Genetic changes happen slowly. Indeed, the genes people inherit may be better suited for yesterday's environment than today's (Archer, 1991). Cultural changes take place much more quickly than genetic changes. So while people born in the early 2000s may be very culturally different than those born in the 1950s, they would still be remarkably similar to people living several millennia earlier. Thus, it is critical for researchers to consider both biological and cultural or learning-based explanations for nonverbal communication.

## THE SOCIOCULTURAL PARADIGM

How is it that people come to use certain nonverbal behaviors in specific settings, or associate a particular behavior (e.g., smiling) with a particular meaning (e.g., happiness)? A sociocultural approach to answering these questions focuses on the ways in which behaviors and their meanings are prescribed at social or cultural levels and on the ways in which people come to acquire them. Encompassing a number of models and theories, the sociocultural paradigm emphasizes the influence of human interaction in creating and transmitting understanding; thus, it highlights the effects of culture, class, religion, sexuality, power, and other socially maintained factors on the enactment and meaning of behavior.

A fundamental assumption separating the sociocultural paradigm from the bio-evolutionary approach is that interpersonal behavior and its meanings are learned through the diffusion of social or cultural knowledge and are, therefore, malleable. Because they are learned rather than innate, both behaviors and their meanings can be altered by changing the knowledge that is conveyed. This explains, for instance, not only why cultures vary one from another in both their behaviors and the meanings of those behaviors, but also why, without access to another culture's knowledge, people often find cross-cultural communication so challenging (e.g., Neuliep, 2003). Thus, to understand how people learn and attribute meaning to communicative behaviors, research in the communication discipline has been informed both by learning theories, such as Bandura's (1977) social learning theory, and by approaches focusing on the social construction of meaning, such as Burgoon and Newton's (1991) social meaning model.

## Learning as a Social Process

At the heart of the sociocultural approach is the idea that most communicative behavior is learned, either through observation, direct instruction, or both. For instance, people learn what are considered to be appropriate ways of expressing their emotions within the culture or even the family in which they are raised. If the rules of appropriateness differ—as they often do from culture to culture (Ekman & Friesen, 1969b) and family to family (Halberstadt, 1986)—then one would expect patterns of behavior likewise to differ. The processes by which people acquire the knowledge necessary to guide their behavior are, therefore, of paramount interest to researchers working within the sociocultural paradigm.

Classical learning theories, such as Thorndike's (1913) *stimulus-response theory*, posited that people learn primarily through a process of trial and error. From this perspective, cognitive associations are formed between stimuli and responses that are transferred from the original context in which they were learned to other contexts that are similar. For example, a child may discover that when she cries (a stimulus), her mother feeds her (a response). As this pattern recurs, the child forms a cognitive association between crying and getting fed, which she can henceforth invoke deliberately when she wants to eat. However, the stimulus-response association formed in her home would not necessarily transfer to a different environment; thus, the child may not realize (at least at first) that she can elicit food by crying while accompanying her mother to the grocery store.

A potential limitation of classical learning theory, however, is that it fails to explain how people learn behaviors without engaging in trial and error. For instance, children could acquire knowledge about gesticulation by enacting various gestures and ascertaining their consequences; alternately, they may learn about the effects of particular gestures by observing the behavior of others. In contrast to classical learning theory's emphasis on trial and error, Bandura's (1977) *social learning theory* posits that behavioral learning occurs most effectively when people observe the enactment of behaviors by others in a social situation and take stock of the consequences of those behaviors. Bandura (1977) suggested that:

Learning would be exceedingly laborious, not to mention hazardous, if people had to rely solely on the effects of their own actions to inform them what to do. Fortunately, most human behavior is learned observationally through modeling: from observing others one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action. (p. 22)

Bandura's theory, therefore, conceives of learning as a socially embedded process. It is related to Vygotsky's (1978) *social development theory* and

Lave's (1988; Lave & Wenger, 1990) *theory of situated learning*, both of which emphasize the influence of context and the social and cultural embeddedness of learning.

The effects of social learning can be observed in a range of contexts. For instance, children may observe aggressive behavior presented in a positive light in movies and television shows and then develop into aggressive adolescents or adults themselves (American Academy of Pediatrics, 1996). Similarly, they can observe affectionate behavior from their parents and then grow up to be affectionate parents to their own children (see Floyd & Morman, 2000). People may potentially learn how to deal with conflict, how to act masculine or feminine, or how to behave appropriately in various social situations, at least partially through the process of observation. For example, according to Eagley's (1983, 1987) application of *social role theory*, children learn how to act masculine or feminine based on the different social roles that they see men and women enact in society. Boys are taught to be masculine by displaying more agentic, instrumental, and dominant behavior. Girls, on the other hand, are taught to be more affiliative, expressive, and cooperative (e.g., Brody, 1985; Eagley, 1983). According to Eagley (1987), social roles are only learned when they are modeled by groups and individuals; thus, these roles are social constructions rather than innate predispositions. Eagley also emphasized the importance of reinforcement, noting that social roles do not always have to be internalized—rather, people often display gendered behavior because they expect to be rewarded for doing so or punished for not doing so.

Eagley's reasoning is largely consistent with Bandura's theorizing about social learning. Bandura believed that the ability of social learning to instigate behavior change depends on two important aspects of the learning process: modeling and reinforcement. Initially, he proposed, a behavior must be modeled effectively by someone other than the learner. According to social learning theory, effective modeling requires four conditions to be met, the first two of which are that the learner pay adequate attention to the model and have adequate retention of the information. That is, behavior cannot be modeled effectively if learners are unable to see or hear, and then remember, the behavior. The third condition is that the learner must have sufficient motor ability to replicate the observed behavior. Observed behavior cannot be learned and then reproduced if the learner lacks the coordination or physical ability to perform the behavior; thus, an infant would not learn to drive a car through observation, nor would most adults learn through observation to run a four-minute mile. Finally, even if learners have sufficient attention, retention, and motor ability to perform observed behaviors, they must also have the motivation to do so. Social learning theory posits that people are especially motivated to adopt a behavior if they observe it being modeled by someone they admire (e.g., an older sibling, a fa-

favorite teacher, a sports figure) or someone with whom they strongly identify (e.g., a friend). This helps explain the effectiveness of both celebrity endorsements and peer pressure in influencing behavior (see Davis, 1992; McCracken, 1989.)

A second important factor affecting social learning is reinforcement. According to social learning theory, modeled behavior is more likely to be adopted if it is reinforced through reward than if it elicits censure or punishment. Reinforcement might come from the person modeling the behavior or from a third party. For example, if a child observes his parents acting politely and then adopts the same behavior, he may elicit praise from his parents or from others who wish to acknowledge and reinforce his good behavior. Reinforcement can also derive directly from the behavior itself; for instance, a young girl may learn through observation to take part in athletic events and then discover that she enjoys them. Finally, reinforcement can come vicariously through the person modeling the behavior, such that the learner adopts a given behavior after observing the model being reinforced for enacting it.

Examples of how this reinforcement process works can be found in the literature on sex differences in reactions to emotional expression in children. For instance, Fuchs and Thelen (1988) found that elementary school-aged girls expected their mothers to act negatively toward them if they displayed anger but positively if they displayed sadness. Boys, on the other hand, expected their parents to react negatively if they expressed sadness. Thus, based on this reinforcement pattern, girls should be more likely to inhibit angry expressions than boys, and boys should be more likely to inhibit displays of sadness (such as crying) than girls. Similarly, Lemerise and Dodge's (1993) review of the anger literature led them to conclude that, compared to girls, boys are more likely to receive attention or rewards from others when they express anger or aggression. By contrast, when girls show anger or aggression, people are more likely to ignore or punish them.

As the work on sex differences in anger expression exemplifies, social learning theory has been applied extensively to the study of aggression since its introduction (Bandura, 1973). The theory has also been applied to psychological disorders, especially in the context of behavior modification (Bandura, 1969), thus providing the theoretical foundation for the technique of behavior modeling that is widely used by clinicians. In recent years, Bandura's work has focused on the concept of self-efficacy in a variety of contexts (e.g., Bandura, 1997). The ideas espoused in social learning theory also undergird a number of theoretic principles used in the study of human communication. We will illustrate their relevance to several theories pertinent to nonverbal behavior later in this chapter.

The social learning approach emphasizes the socially influenced processes in which people learn new behaviors. Equally fundamental to the

sociocultural paradigm's view of nonverbal communication, however, is the idea that the meanings ascribed to nonverbal behavior are largely also the product of social interaction and consensus. We take up this issue in the subsequent section.

### **Meanings as Socially Prescribed**

Theories firmly grounded in the sociocultural paradigm often share the assumption that most nonverbal behaviors do not have inherent meanings but, instead, acquire their meanings through social consensus. This seems an evident proposition when, for instance, one acknowledges that the same behavior can vary in meaning from one social or cultural group to another (see Morris, Collett, Marsh, & O'Shaughnessy, 1979). In the arena of nonverbal communication, this assumption is made explicit in Burgoon and Newton's (1991) *social meaning model* (SMM).

In contrast to Heider's (1958) principle of meaning embeddedness, which suggests that the meanings of behaviors are located within the particular individuals or interactions from whence they originate, Burgoon and Newton's SMM provides that there are consensually recognized meanings for nonverbal behavior within a given social or language community. That is, some nonverbal behaviors "comprise a socially shared vocabulary of relational communication" (Burgoon & Newton, 1991, p. 96; see also Burgoon, Coker, & Coker, 1986; Burgoon, Manusov, Mineo, & Hale, 1985). Consequently, all receivers and observers of a specified behavior within such a community should attribute fairly consistent meanings to that behavior.

Burgoon and Newton (1991) suggested that support for the SMM perspective requires attention to three specific issues. First, the range of interpretations that a given nonverbal behavior might elicit should be identified. For instance, nonverbal immediacy behaviors can convey interest or involvement in some situations, but power or dominance in others. Similarly, matching another's nonverbal behaviors can communicate similarity and emotional connectedness, but might also be used as a means of intimidating or belittling. Consequently, it is important to identify empirically the range and variety of meanings that might be ascribed to a given behavior. Second, support for the SMM requires evidence that senders and receivers of a given behavior converge in their interpretations of it. In other words, if behaviors have socially recognized meaning, then senders' intentions for those behaviors should covary with receivers' interpretations of them. Third, not only should the perspectives of senders and receivers converge with each other, but they should also be congruent with the interpretations of third-party observers of the behavior. The SMM posits that, because behaviors have shared social meaning within a given community, conversa-

tional participants and nonparticipant observers should interpret behaviors similarly.

In a direct experimental test of their model, Burgoon and Newton (1991) had observers watch videotaped interactions made by dyads in which a confederate enacted either high or low nonverbal involvement behaviors. The observers were asked to report the extent to which the involvement behaviors signaled relational messages such as intimacy, receptivity, depth, and formality. Burgoon and Newton then compared these reports with those made by the receivers in the actual interactions. As hypothesized, the authors found that observers' and receivers' interpretations for intimacy, composure, and formality were linearly related. Burgoon and Le Poire (1999) replicated these results, concluding that "there is consensus among observers and participants in the ways in which nonverbal behaviors contribute to relational perceptions" such as intimacy, composure, and formality (pp. 121–122). There was also some consensus regarding perceptions of behaviors signaling dominance; both conversational participants and nonparticipant observers rated people as more dominant when they had expressive, relaxed, and intense voices, laughed in a relaxed manner, leaned forward, used direct gaze, smiled, nodded, and displayed kinesic animation.

The Burgoon and Le Poire (1999) study, as well as other research testing the SMM, was guided by the lens model of nonverbal judgment. First developed by Brunswik (1956) and then modified by Scherer (1978, 1979, 1982), the lens model examines how nonverbal behaviors are interpreted from multiple perspectives. For example, Scherer (1978, 1979) contended that a comprehensive method for investigating perceptions of nonverbal behavior should include examining associations between a sender's behavior (e.g., vocal tone) and his or her self-reported personality traits (e.g., dominance), as well as associations between a sender's behavior and a receiver's judgment about the sender's personality traits. In Scherer's model, nonverbal behaviors are distal cues that influence the subjective judgments receivers make. Burgoon and Le Poire (1999) applied Scherer's lens model to the study of relational messages by investigating the links between (a) distal cues, which included specific behaviors such as eye contact and smiling, (b) proximal percepts, which constituted judgments about the sender's overall level of pleasantness and involvement, and (c) relational message interpretations, such as perceiving someone as dominant or immediate.

Other scholars have also used the lens model as a framework for investigating associations between nonverbal behavior and perceptions of personality traits such as dominance–submissiveness, extraversion–introversion, and femininity–masculinity. Gifford (1994) found that gesturing and sitting with the legs extended outward associated with both self-reports and observer ratings of dominance. Lippa (1998) demonstrated that extraverted people speak with louder and more expressive voices than introverted peo-



ple, and that receivers associate vocal volume and expressiveness with extraversion. For femininity–masculinity, Lippa (1998) showed that men who defined themselves as masculine tended to have inexpressive, low-pitched voices. These same vocal characteristics were associated with receivers' judgments of masculinity. Thus, certain vocal attributes and kinesic behaviors appear to be connected to perceptions of personality traits fairly consistently, suggesting that they have consensual social meaning.

Additional studies using different interpersonal contexts have also provided support for the SMM. For example, Burgoon, Buller, Floyd, and Grandpre (1996) explored the perspectives of senders, receivers, and observers in an interpersonal deception situation. They instructed confederates to be deceptive during a dyadic conversation with a naive receiver while a naive observer watched the conversation. Consistent with the SMM, Burgoon et al. found strong linear associations between senders' and receivers' perceptions of the truthfulness of the senders' information, the completeness of that information, and the senders' overall credibility. The observers' and senders' reports of the completeness of the senders' information and the extent to which the senders made a good impression were also linearly related. Similarly, Floyd and Erbert (2003) found congruence between the perspectives of senders, receivers, and observers in the interpretations of nonverbal matching behavior.

Undoubtedly, there are times when senders, receivers, and observers interpret the same behavior differently. The research on dominance provides a good example of this incongruence. In Gifford's (1994) study, several behaviors were correlated with perceived dominance–ambition as rated by an observer, but not actual dominance–submission as rated by the participant (e.g., headshaking and direct body orientation were correlated with self-reported dominance but not observer ratings). Similarly, although Burgoon and Le Poire (1999) found that conversational participants and nonparticipant observers tended to perceive many of the same behaviors as reflecting dominance, there were some notable discrepancies. Smooth turn-switching was negatively associated with perceptions of dominance for observers, but not for participants. Conversely, using adaptors was negatively associated with perceptions of dominance for participants, but not for observers. These findings may be related to the visual vantage point and cognitive load of perceivers. For example, a person in the role of conversational participant may not notice interruptions, talkovers, or other evidence of unsmooth turn-switching as much as an observer would, perhaps because he or she is more cognitively busy during the conversation. By contrast, adaptors may be easier to see for participants than observers. Senders, receivers, and observers are also likely to interpret behaviors differently when those behaviors do not have strong consensual meanings. When decoding ambiguous behaviors, people are more likely to take fac-



tors related to personality, context, and the state of the relationship into account, which leads to more variable interpretations (Burgoon & Hale, 1988).

### **The Sociocultural Paradigm: Summary and Critique**

Central to the sociocultural paradigm, then, are the two ideas that: (1) Most nonverbal communication is learned, rather than innate. (2) Most nonverbal behaviors do not have inherent meanings, but rather, their meanings are products of social consensus. These principles have found widespread acceptance within the field of human communication, perhaps, in part, because of their considerable intuitive appeal. It is easy to identify examples of behavioral learning simply by considering the apparent influence of parents, teachers, gender roles, cultural norms, and the media on children's behaviors. Consequently, the paradigm seems to have face validity as an approach that is isomorphic with people's everyday experiences.

A related strength of the sociocultural paradigm is found in the magnitude of the empirical evidence that has been marshaled in support of it. Perhaps as a result of its intuitive appeal, many researchers have applied the tenets of the paradigm to their own work and have found support for the influence of learning, or for the social embeddedness of meaning, across a wide range of topics, ranging from personality development (Hoffman, 1991) and child discipline (Strauss, Sugarman, & Giles-Sims, 1997), to gender role acquisition (Witt, 1997), doctor-patient communication (Ladyshewsky & Gotjamanos 1997), and the relational messages of nonverbal behaviors (Burgoon & Le Poire, 1999).

One potential criticism of the sociocultural paradigm is that its emphasis on the social influences on learning behavior and creating meaning obscures what may be substantial nonsocial influences on the same outcomes, including the influence of genetics. Certainly, any paradigm will lead its proponents to attend to particular variables more than others; the problem lies in the potential to misinterpret genetic effects, for instance, as the effects of learning or socialization. An important example derives from the study of parental influence on child personality development. As Harris (1998) noted in her detailed review, there is no shortage of social science research showing that children are more likely than not to grow up with personalities similar to those of their parents. That is, pleasant, affectionate parents tend to rear pleasant, affectionate children, whereas aggressive, violent parents tend to rear children who are likewise aggressive and violent. Working from the framework of the sociocultural paradigm, one would find little difficulty explaining these robust patterns as products of socialization: children observe their parents behaving in a pleasant, affectionate manner and come to adopt the same disposition themselves. However, as Harris (1995) pointed out, much of the research examining parental-offspring con-

gruence in disposition has failed to control for an important alternative hypothesis: children are similar to their parents because of their genetic relatedness to the parents, not because of how they were socialized. To the extent that researchers in this area have failed to entertain (and, consequently, to control for) such an alternative, therefore, they may run the risk of misattributing—or at least, overattributing—the observed similarity between parents and children to a social influence (parental socialization), when a nonsocial influence (genetic similarity) is also operative.

## **SPECIFIC THEORIES**

Considered separately, the bio-evolutionary and sociocultural paradigms both offer detailed yet incomplete explanations of the factors influencing nonverbal communication. Considered together, the two paradigms offer a richer and more comprehensive theoretical framework. Biology and the social environment interact to affect how people encode and decode nonverbal behavior, so adhering to one paradigm without incorporating the other provides a limited view of the communication process. Next, we review six specific theories related to patterns of nonverbal communication in relationships: expectancy violations theory, discrepancy arousal theory, cognitive valence theory, communication accommodation theory, interaction adaptation theory, and the parallel process model. Many of these theories rely on biology, social learning, or both to make predictions about the exchange of nonverbal behavior.

### **Expectancy Violations Theory**

Expectancy violations theory (EVT; Burgoon, 1978; Burgoon & Hale, 1988; Burgoon & Le Poire, 1993; Burgoon & Walther, 1990; Burgoon, Walther, & Baesler, 1992) begins with the premise that humans hold expectations about their own and others' behaviors (see Fig. 2.1). Some expectations are predictive, meaning that they refer to what will happen in a given situation (e.g., Abby might expect her grandfather to give her presents on her birthday because he always does). Other expectations are prescriptive, referring to what should happen in a given situation (e.g., Abby may expect her grandfather to give her presents because that's what grandfathers are supposed to do). Although the reasons for the two types of expectancies differ—consistency in prior behavior versus a sense of oughtness—the resulting expectation is often the same.

EVT acknowledges that people's expectations are derived from a variety of sources, including personal observation of prior behavior, knowledge of cultural or social prescriptives, direct instruction, and relational familiarity.

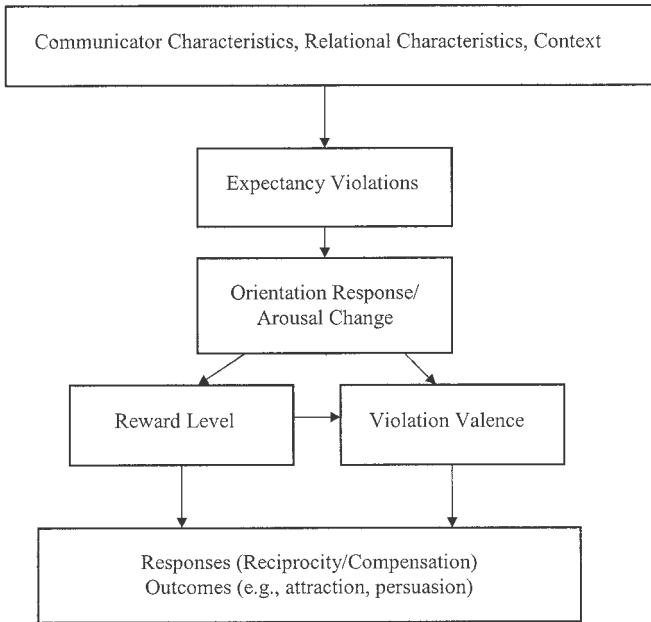


FIG. 2.1. The basic structure of expectancy violations theory.

Contextual factors are critical in determining expectancies. For instance, although a husband may expect his wife to be easygoing and friendly in most situations, he might also expect that she will get aggressive and angry during a conflict episode. As this example suggests, expectancies are presumed to be learned (and therefore, modifiable) rather than driven by evolutionary or biological imperatives. Whatever their source and whatever their form, expectancies are posited to be a strong motivating force when it comes to guiding one's own behavior or evaluating the behavior of others.

One property of expectancies is that they can either be confirmed or violated. EVT recognizes that most interpersonal behavior in the majority of situations is expectancy-confirming, meaning that it reflects either what was predicted or what was prescribed (or both). Indeed, expectations that are rarely confirmed are likely to be changed over time, so as to better reflect the behavioral norms or social prescriptions.

When people engage in expectancy-violating behavior, however, EVT proposes that these violations heighten the arousal of the recipient or observer and invite a series of cognitive appraisals that assess the meaning of the behavior and help to determine the appropriate response. Other theories would likely predict that people are inclined to react negatively (in terms of their evaluation or their behavioral response, or both) when their expectations are violated, because people value certainty (Berger &

Calabrese, 1975) and dislike dissonance (Festinger, 1957). By contrast, EVT posits that expectancy violations can elicit either positive or negative reactions and that two factors work to determine which type of outcome occurs: the violation valence and the communicator reward level.

Violation valence refers to whether the expectancy-violating behavior is considered to be positive or negative. Some behaviors, like a slap in the face, are likely to be judged negatively in most any situation, but many other behaviors can vary in their valence. Receiving a gift may be considered positive in many circumstances, but if the gift comes with unwelcome obligations or if it causes embarrassment for the recipient because he or she failed to get a gift for the giver, then the same behavior might be judged negatively. In those situations when the valence of a behavior is ambiguous, EVT provides that people assess the reward value of the communicator who enacted the behavior, as a means of assigning a valence to the behavior. A personal space violation, for instance, may be judged negatively if enacted by most people. However, if the violator is interpersonally rewarding in some way (e.g., he or she is famous, very attractive, very powerful, or a valued relational partner), then the same personal space violation might instead be considered positive. In other words, the valence of some behaviors may vary as a function of who is performing them.

These assessments provide an overall valence to the violation. A positive violation is similar to a pleasant surprise; that is, it is something that is better than what was expected. If Abby expects \$100 from her grandfather on her birthday and gets \$1,000 instead, this would likely qualify as a positive violation. Conversely, a negative violation is akin to an unpleasant surprise (e.g., receiving \$10 instead of \$100). EVT predicts that rewarding individuals are evaluated most favorably when they commit positive violations, whereas nonrewarding or average people are evaluated most favorably when they conform to expectations. During a blind date, for example, a person without any particular reward value (e.g., average attractiveness and social skills) would garner a more positive evaluation by behaving normally than by engaging in unexpectedly high levels of nonverbal immediacy (e.g., using close distances, touch, or excessive smiling). In this instance, high immediacy would qualify as a negative violation and would elicit more negative evaluations from the dating partner. According to EVT, however, a person with high reward value (e.g., very attractive and socially skilled) could elicit a more positive evaluation by violating the partner's expectations about immediacy behavior than by confirming them. That is, because of the person's high reward value, abnormally high immediacy behaviors would qualify as a positive violation and would cause the person to be judged more positively than if he or she had behaved normally. Take our fictional couple, Tina and David, as an example. If David considers Tina to be an especially attractive and desirable woman, he would likely be excited and flat-

tered if she directed unexpectedly high levels of nonverbal immediacy at him on a first date. Coming from a less rewarding woman, the same behaviors could make David feel anxious and overwhelmed.

Thus, behavioral reactions to expectancy violations are based on the reward value of the communicator as well as the valence of the unexpected behavior. As Fig. 2.2 shows, when a rewarding partner engages in higher than expected immediacy (a positive violation), EVT predicts that the receiver will reciprocate by increasing immediacy. In contrast, when a rewarding partner engages in lower than expected immediacy (a negative violation), the receiver should compensate (perhaps by smiling and asking the partner if something is wrong) in an effort to return the interaction to a more comfortable level of intimacy. Notice that either way, the prediction is for people to increase immediacy in response to an expectancy violation by a highly rewarding communicator. For unrewarding communicators, the opposite pattern emerges. When unrewarding partners uses high levels of immediacy (a negative violation), receivers are theorized to compensate (perhaps by frowning and moving away) to thwart any movement toward increased intimacy unless the increased immediacy causes them to reevaluate the partner as more rewarding. If an unrewarding partner uses unex-

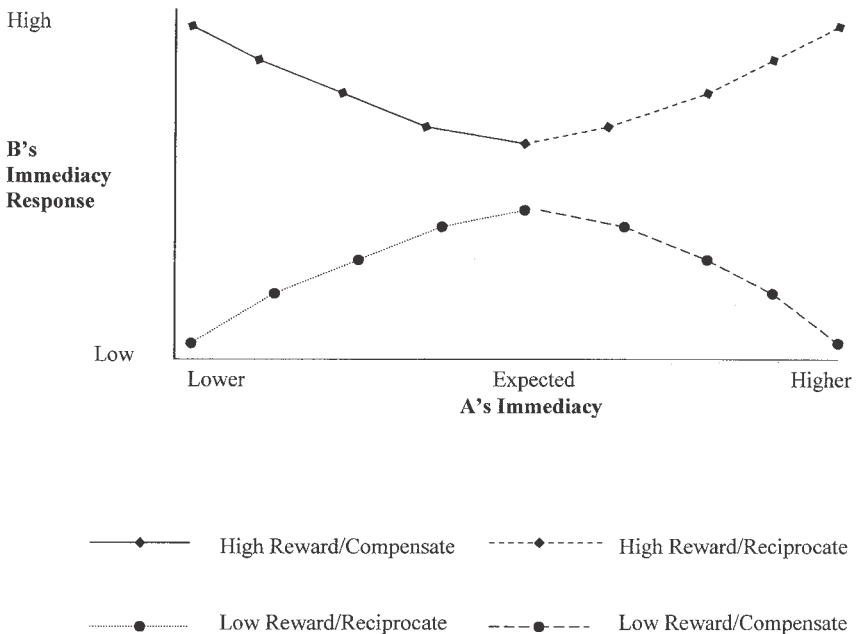


FIG. 2.2. Predictions from expectancy violations theory. From Burgoon, Stern, and Dillman (1995). Adapted with permission from Cambridge University Press.

pectedly low levels of immediacy, EVT predicts receivers will reciprocate by acting more nonimmediate themselves.

Since its introduction, EVT has engendered a good deal of empirical support in a number of content areas, including gaze (Burgoon, Coker, & Coker, 1986; Burgoon, Manusov, Mineo, & Hale, 1985; Manusov, 1984), touch (Burgoon & Walther, 1990; Burgoon et al., 1992), conversational involvement and immediacy (Burgoon & Hale, 1988; Burgoon, Newton, Walther, & Baesler, 1989), affection (Floyd & Voloudakis, 1999), and pleasantness (Burgoon & Le Poire, 1993; Burgoon, Le Poire, & Rosenthal, 1995; for reviews, see Burgoon, 1995 and Burgoon, Stern, & Dillman, 1995). Contrary to the prediction that nonimmediacy by rewarding communicators elicits compensation, some studies demonstrate that there are instances when people reciprocate rather than compensate for a rewarding partner's antisocial or avoidant behaviors (e.g., Guerrero, Jones, & Burgoon, 2000; Le Poire & Burgoon, 1994; see also chap. 8, this volume, on conflict), especially if the partner persists in using nonimmediacy. In general, however, EVT's predictions have been supported by considerable empirical research.

### **Discrepancy Arousal Theory**

As a theory emphasizing the role arousal plays in influencing how people react to increases or decreases in a partner's level of expressiveness, Cappella and Greene's (1982) Discrepancy Arousal Theory (DAT) is rooted in biology. In fact, DAT was advanced as an alternative to some of the more cognitively based models predicting patterns of reciprocity and compensation (such as Patterson's 1976 arousal labeling theory). Cappella and Greene argued that social interaction unfolds rapidly, with speaker switches taking only about 0.1 to 0.2 seconds. Consequently, responses to changes in a partner's nonverbal communication should be almost automatic rather than laden with cognitive processing.

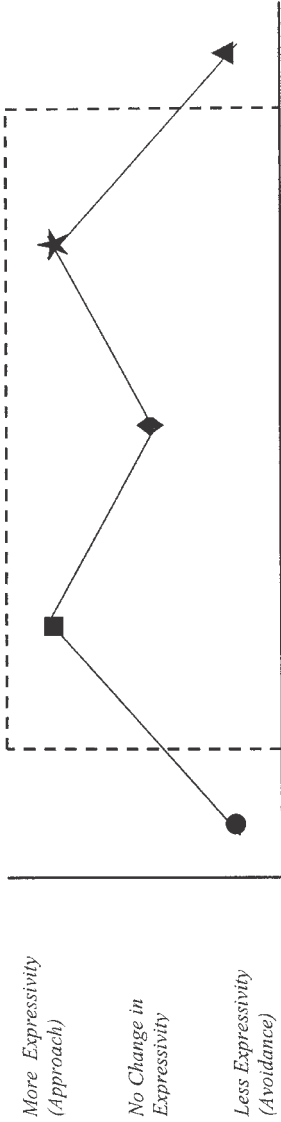
Using Stern's (1974) work on the interaction patterns of infants and caregivers as a launching pad for DAT, Cappella and Greene argued that *discrepancy* also explains reactions to nonverbal and verbal communication in interactions between adults. Discrepancy refers to the difference between expected and actual behavior. Similar to EVT, Cappella and Greene (1982) theorized that people develop behavioral expectations based on factors such as the situation, social and cultural norms, personal preferences, and past experiences. This part of the theory relies on prior social learning. When actual behavior falls within an acceptance region, the behavior is similar to what was expected. For example, Tina might expect David to act courteous and friendly on their first date, so behaviors such as smiling, opening the car door for her, and asking polite questions would fall under the acceptance range. Cappella and Greene specify that people do not al-

ways have a set expectation for a specific behavior; rather, they expect people to engage in a certain range of behaviors that fall within the acceptance region. Thus, David could use a variety of behaviors that would be acceptable to Tina on a first date.

The degree of discrepancy (if any) experienced is based on where a behavior falls relative to the acceptance region (see Fig. 2.3). DAT specifies a direct association between the degree of discrepancy and arousal, with larger discrepancies producing more arousal. When a partner's behavior conforms to the expectancy, there is no discrepancy and no arousal. When a partner's behavior diverges somewhat from the expectancy, but still falls within the acceptable range, a person experiences moderate arousal change. For example, David might treat Tina somewhat better than she expected (by giving her flowers and taking her to an especially nice restaurant) or he might act somewhat more reserved than Tina expected (by using less eye contact and talking less than expected). Although these behaviors would be somewhat unexpected, they could still fit within Tina's cognitive schema of what first date behaviors look like. On the other hand, if David enacted behavior that fell outside of Tina's range of acceptable, expected behaviors (e.g., he acts cold and disinterested or tries to kiss her passionately only 10 minutes into the date), Tina is likely to experience high levels of arousal change. This example illustrates the DAT principle that behaviors which are highly discrepant (operationalized as falling outside of the acceptance region) produce high levels of arousal change in a receiver.

According to DAT, the degree of arousal change then predicts the receiver's affective response. When the expected behavior is not discrepant from actual behavior, there is no arousal change and consequently no affective reaction. When the expected behavior is somewhat discrepant from actual behavior, DAT stipulates that there will be a moderate level of arousal change leading to positive affect. So if David bought Tina flowers and took her to an especially nice restaurant, Tina would likely feel pleasant emotions. Similarly, if David seemed a little shyer than Tina anticipates, she might see his behavior as endearing and even possibly as a sign that he is really interested in her. The key here is that Tina experiences moderate levels of arousal change in reaction to David's somewhat expected behavior. However, when the expected behavior is highly discrepant from the actual behavior, DAT predicts that there will be a high level of arousal change accompanied by negative affect. So if David's cold and disinterested behavior falls outside of Tina's acceptance region, DAT would predict that Tina would experience high arousal change and negative emotions such as anxiety, dislike, and frustration. On the other end of the spectrum, DAT would predict that if David engaged in overly friendly behavior (such as trying to get physically intimate too early during the date), Tina would also experience high arousal change and negative emotions such as anxiety, dislike, and anger.

Level of Expressivity in Person B's Response:



Actual Level of Person A's Expressivity (As Compared to Expected Level):

<i>Much Less Expressivity</i>	<i>Somewhat Less Expressivity</i>	<i>Expected Level of Expressivity</i>	<i>Somewhat More Expressivity</i>	<i>Much More Expressivity</i>
High Discrepancy High Arousal Negative Affect	Moderate Discrepancy Moderate Arousal Positive Affect	No Discrepancy No Arousal Change No Change in Affect	Moderate Discrepancy Moderate Arousal Positive Affect	High Discrepancy High Arousal Negative Affect

- = A avoids, B avoids (reciprocity)
- = A avoids, B approaches (compensation)
- ◆ = No change (no reciprocity or compensation)
- ★ = A approaches, B approaches (reciprocity)
- ▲ = A approaches, B avoids (compensation)

FIG. 2.3. Predictions from discrepancy arousal theory. From Guerrero, Alberts, and Heisterkamp (2001). Adapted with permission of John Wiley & Sons.



The final link in the chain of DAT predictions involves the association between affective and behavioral reactions. The experience of positive emotion is theorized to activate approach tendencies and expressive behaviors, whereas the experience of negative emotion is theorized to activate avoidance tendencies and inexpressive behavior. So if Tina feels positive emotion after David gives her flowers or acts shy and reserved, she is likely to become more expressive and involved. Notice that in the case of David giving Tina flowers, an expressive behavior would be met with an expressive response, which constitutes reciprocity. However, in the case of David acting shy and reserved, Tina's expressive response would be a compensatory move, presumably designed to show interest and make David feel more comfortable. In the other two situations—David acts cold and disinterested or tries to kiss her at the beginning of the date—Tina's negative affective reaction would lead her to become avoidant and inexpressive. Tina's response would be categorized as reciprocal in the first case (David's cold behavior is met with Tina's avoidant behavior) and compensatory in the second case (David's attempt to become intimate is rebuffed by Tina).

Studies testing ideas from DAT have produced mixed results. Based on DAT, Cappella and Greene (1984) argued that high sensation seekers would have wider acceptance regions related to spatial invasions and thus be less likely to react with negative affect and compensation than low sensation seekers. Although trait measures of sensation seeking failed to support this hypothesis, a supplementary analysis using a combined trait-state measure showed that individuals who evaluated the spatial invasion more negatively displayed less gaze, lean, and direct body orientation than those who evaluated the spatial invasion less negatively. Other experimental studies have investigated whether people respond differently to moderate versus dramatic changes in involvement, as DAT predicts. In an interview study where confederates posing as medical students interacted with participants, Le Poire and Burgoon (1994) found that, contrary to DAT, arousal change was not monotonically related to the degree to which the supposed medical student altered involvement behavior. However, consistent with DAT, the size of involvement change had a direct effect on emotional experience, with emotional positivity decreasing as discrepancy increased. Thus, Le Poire and Burgoon suggested that discrepancy may be a better predictor of emotional responses than arousal.

Data from a study on cross-sex friendships by Andersen, Guerrero, Buller, and Jorgensen (1998) produced stronger support for DAT. Participants receiving high levels of immediacy change became more aroused than those receiving moderate levels of immediacy change. In addition, moderate increases in immediacy produced reciprocity, whereas high increases in immediacy produced a mix of reciprocity and compensation. The study by Guerrero et al. (2000) focusing on romantic couples demonstrates that

reciprocity is stronger in response to very low immediacy than moderately low immediacy, which comports with DAT. However, people in the moderately low immediacy condition showed a mix of compensatory and reciprocal responses, but people in the moderate and high immediacy conditions tended to reciprocate, suggesting that very high levels of immediacy change do not always produce compensation. Taken together, the results from these studies also suggest that DAT needs to account for mixed responses to immediacy change. As Guerrero, Alberts, and Heisterkamp (2001) argued:

Behaviors falling well within the region of acceptance may be most likely to produce strictly approach responses, while behaviors falling well outside of the region of acceptance may be most likely to produce strictly avoidant responses. Those responses that are closer to the edge of the region of acceptance may produce more ambivalent, mixed responses. (p. 70)

### **Cognitive Valence Theory**

As in DAT, arousal change plays a prominent role in Andersen's (1985, 1998a) Cognitive Valence Theory (CVT). Both CVT and DAT predict that high levels of arousal change automatically lead to negative affective responses and avoidant behavior. CVT differs from DAT in several respects, however. For instance, CVT only focuses on responses to increases in a partner's immediacy behavior, whereas DAT includes predictions for both increases and decreases in expressive behavior. Cognitive processes are emphasized more strongly in CVT, with cognition affecting whether people react positively or negatively to increased immediacy that produces moderate levels of arousal. Thus, CVT is based on biological principles related to biology and innate flight or fight responses, as well as social learning principles related to cultural, relational, and individual factors affecting the cognitive interpretation of immediacy behaviors.

The biological element of the theory is evident when examining predictions for immediacy increases that produce either low or high levels of arousal change. According to CVT (see Fig. 2.4), when people perceive that their partners increase immediacy, they likely experience some change in arousal level. If arousal change is low, there will be little (if any) affective or behavioral reaction. However, if arousal change is high, people will experience an aversive affective reaction (such as fear, embarrassment, or disgust) and react with avoidant, compensatory behaviors. This fits our earlier example of David trying to kiss Tina within the initial moments of their first date. If David's behavior led to a high level of arousal, Tina might feel anxious and embarrassed, leading her to back away or turn her face away from David. As in DAT, in CVT responses to highly arousing behaviors are auto-

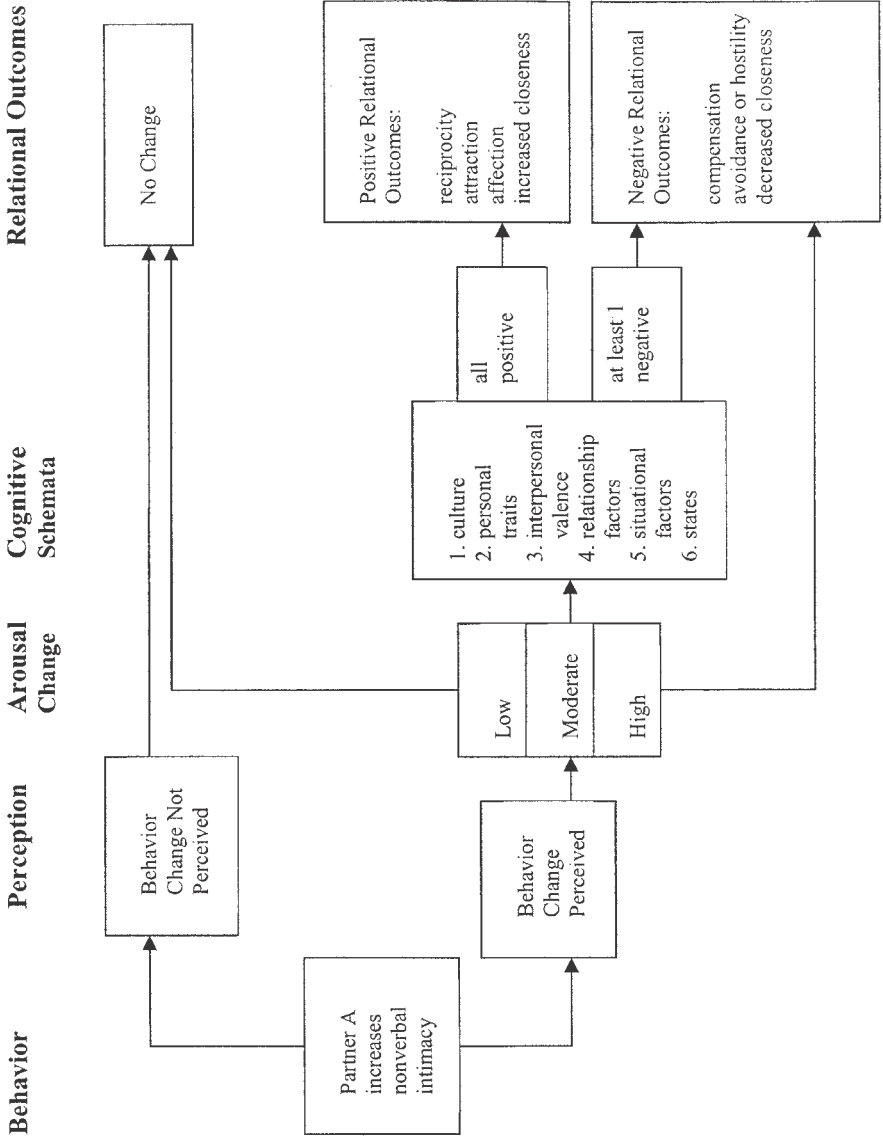


FIG. 2.4. Cognitive valence theory. From Andersen (1985). Adapted with permission from Lawrence Erlbaum Associates.

matic, with people following an innate tendency to move away from or fight against the arousing stimulus.

However, CVT stipulates that the process related to moderate levels of arousal change is more complex, with cognitive schemata ultimately determining whether people react positively or negatively to a partner's increase in immediacy. Andersen (1985, 1998a) identified six cognitive schemata: (1) cultural appropriateness, (2) personal predispositions, (3) interpersonal valence, (4) relational appropriateness, (5) situational appropriateness, and (6) psychological or physical state. Let's turn back to the example of David's attempt to give Tina an intimate kiss shortly after their first date commences. Assuming that Tina's arousal change is moderate rather than high, how might the six cognitive valencers influence her interpretation of David's behavior? If Tina is from an urban area in the U.S., David's behavior might be perceived as more acceptable than if she is from a small rural town or a different country where people hold conservative attitudes about kissing. Tina's personal predispositions, such as how extraverted and affectionate she is, may also affect her evaluation of David's behavior, as might being female. Interpersonal valence, which is similar to the concept of rewardingness in EVT, refers to Tina's overall assessment of David. Does she find him physically and socially attractive? Does she see him as a passive or aggressive person? These judgments about David could influence her reaction to the attempted kiss, as could the type of relationship they share. Certainly, a kiss might be more expected and more appropriate later in the relationship, or at least later during the date! The situation of a first date also plays a role, as do factors such as where (at her front door or in his car while stopped at a red light) and in front of whom (are his friends around?) the attempted kiss takes place. Finally, Tina's physical and psychological state may affect her reaction. If she is in a good mood she might be more likely to evaluate the kiss positively than if she is tired and has a slight headache

According to Andersen (1998a), these six cognitive schema work together as a filter or screen for making sense of increases in immediacy. The cognitive schema are already in place before the immediacy increase occurs, making it possible for people to apply them to the situation quickly without much conscious thought. Andersen (1992, 1998a) theorized that all six cognitive schemata must be positive if reciprocity is to occur. If even one of the valencers is negative, CVT specifies that compensation will occur. Thus, even if Tina finds David attractive (interpersonal valence), is in a good mood (psychological state), and is a highly affectionate person (personal predisposition), if cultural norms prohibit kissing so early on a first date, CVT predicts that she would evaluate David's behavior negatively and compensate.

Although CVT was built on theory and empirical findings, little research has directly tested its predictions. In their study on responses to increased

immediacy in cross-sex friendships, Andersen et al. (1998) tested three hypotheses relevant to CVT. First, they tested whether participants would compensate when their friends (who acted as confederates) increased their nonverbal immediacy dramatically. Second, they predicted that people would experience and show more arousal change in response to high versus moderate increases in nonverbal immediacy. Third, they hypothesized that the moderate immediacy condition would produce greater variability in responses than the high nonverbal immediacy condition, the latter of which would lead only to avoidant responses. Consistent with CVT (as well as DAT), participants exhibited more negative arousal and defensiveness in the high versus moderate condition. Yet inconsistent with CVT, the high immediacy condition produced a mix of reciprocity and compensation rather than compensation only, and the moderate immediacy condition did not produce more variable responses than the high immediacy condition. Other studies have suggested that the six cognitive schemata may be weighed differently when evaluating immediacy increases, with schemata associated with the relationship and the interpersonal valence of the partner (Andersen, 1992; Guerrero, 2005; Wertin & Andersen, 1996) trumping other factors. In light of findings showing reciprocity to be more common than compensation in interpersonal contexts (see Burgoon, Stern, & Dillman, 1995; Guerrero et al., 2001; Manusov, 1995), researchers have also questioned whether all six cognitive schemata really need to be valenced positively for reciprocity to occur. More empirical research on CVT is needed to address these questions.

### **Communication Accommodation Theory**

Rather than focusing on patterns of reciprocity and compensation as EVT, DAT, and CVT do, Communication Accommodation Theory (CAT) was developed around the related concept of accommodation (Giles, 1973; Giles, Mulac, Bradac, & Johnson, 1987; Shepard, Giles, & Le Poire, 2001). Reciprocity and compensation occur when an individual alters her or his nonverbal behavior in response to a partner's change in immediacy or involvement. Accommodation, however, can involve gradual or rapid movement toward or away from a partner's communication style, without requiring one person to respond to a change in another person's behavior. According to CAT, people use accommodation strategies to help negotiate social distance (Shepard et al., 2001). Two forms of accommodation are identified in CAT: convergence and divergence.

*Convergence* occurs when an individual adapts her or his style so that it becomes more similar to another person's or group's style. People can converge using a variety of nonverbal behaviors, including facial expression, smiling, eye behavior, dress, touch, posture, gait, speech volume rate,

pitch, and accent (Giles & Wadleigh, 1999). For example, when interacting with David and his male friends, Tina might adopt some of their mannerisms. According to CAT, individuals exhibit more convergence when they are with ingroup members (such as those from the same culture, coculture, or social group) and people they like.

*Divergence*, in contrast, occurs when an individual adapts his or her style so that it becomes less similar to another person's or group's style. People typically practice divergence when they dislike or want to distance themselves from a particular person or group. For example, an individual might diverge from the communication style of a soon-to-be ex-boyfriend or girlfriend as a way of signaling that they are no longer a couple. In addition, CAT specifies that people sometimes diverge when they want to emphasize their identification with a particular ingroup by acting different than outgroup members. So an adolescent might diverge from the communication style of her former group of unpopular friends in an attempt to show that she fits in with the popular kids.

Accommodation can be described in terms of whether the pattern is upward or downward, partial or full, unimodal or multimodal, and symmetrical or asymmetrical (Shepard et al., 2001). Upward and downward movement happens when people move toward a more or less socially prestigious communication style. For example, a client who converges toward the nonverbal style of his highly respected lawyer is practicing upward convergence. Partial accommodation occurs when people show some convergence or divergence toward one another's positions, and full accommodation occurs when their behaviors are exactly the same. With unimodal accommodation, only one behavior shows a pattern of convergence or divergence. Perhaps Tina imitates a gesture that she sees David's friends using, but beyond that she maintains her own communication style. By contrast, Tina could converge in a multimodal manner by adopting their facial expressions and posture as well as their gestures. Finally, accommodation can be either symmetrical (both people engage in similar behavioral adjustments) or asymmetrical (two people's accommodation patterns are at cross-purposes).

Regardless of the specific type of accommodation that eventually takes place, CAT specifies that social and historical factors frame the interaction and set the stage for adaptation (see Fig. 2.5). The sociohistorical context includes perceptions regarding the social status of individuals and groups, which affect an individual's initial accommodative orientation. This orientation is based on a three factors: *intrapersonal factors* involving social and personal identity issues; *intergroup factors* involving one's perceptions of ingroups and outgroups; and an individual's *initial orientation*, which includes one's behavioral predispositions and tendencies. The immediate situation may modify one's initial tendency to accommodate. As Shepard et al. (2001) stated: "Situational variables include norms and roles that prescribe behav-

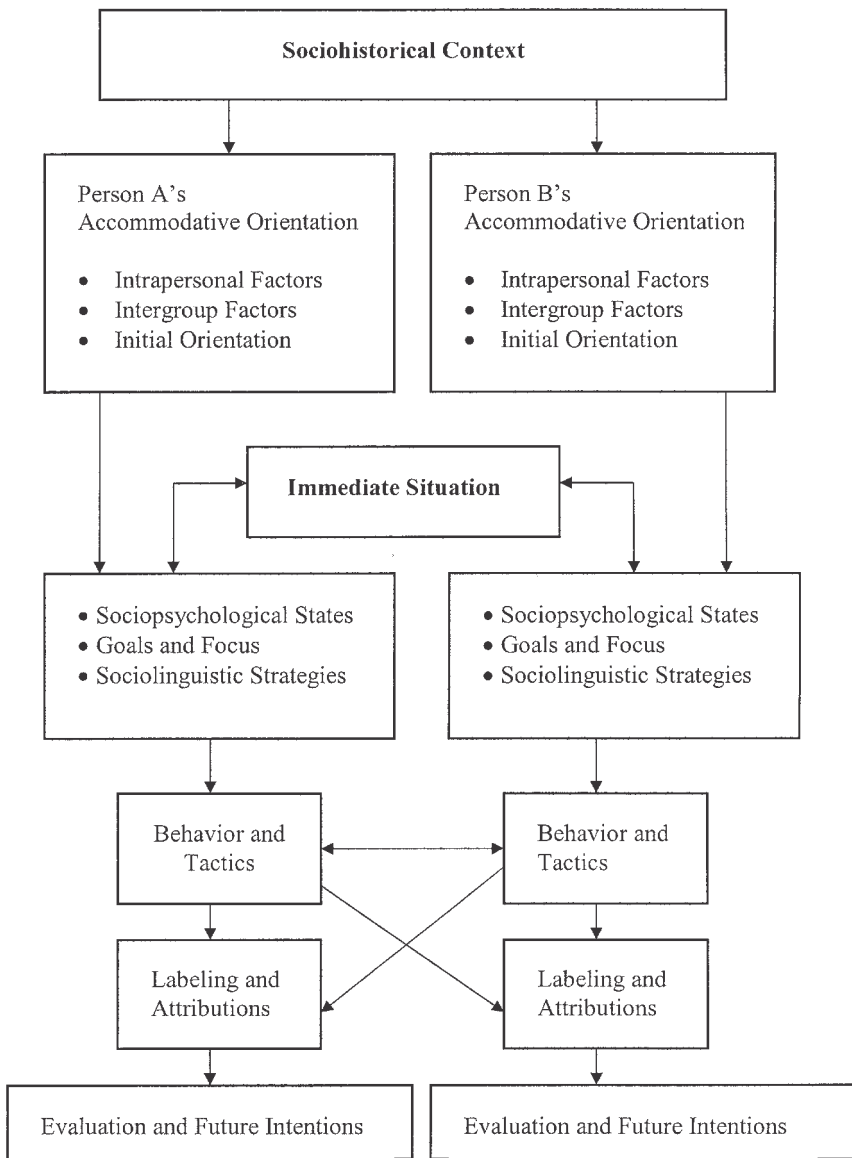


FIG. 2.5. A simplified representation of communication accommodation theory. From Shepard, Giles, and Le Poire (2001). Adapted with permission of John Wiley and Sons.

ior in any given context. Often, the norms prescribed by the situation override any ability to accommodate at all" (p. 48). The situation is defined by sociopsychological states (including motivation, emotion, stereotypes, and expectations) as well as goals such as wanting to gain approval, identify with others, differentiate from others, or communicate effectively. Based on these goals, individuals will engage in specific sociolinguistic strategies and behaviors that help them accommodate toward or away from a partner's communication style. The way that behaviors are labeled and interpreted then influences whether a receiver will converge or diverge. For example, if Jennifer starts speaking with a Southern accent when visiting her friend Sarah in Alabama, Sarah might interpret Jennifer's convergence as a sign of liking or as a condescending form of teasing. If Sarah makes the former attribution, she might continue to speak with an accent, but if she makes the latter attribution she might either emphasize her accent (to show her anger) or try to speak without a strong accent. Finally, the interaction will lead to new evaluations and future intentions that will affect Sarah and Jennifer's accommodative orientation the next time they communicate.

Most of the research testing CAT has focused on involves the behavioral manifestation of accommodation. Indeed, CAT has been applied and tested in a variety of contexts (see Giles, Coupland, & Coupland, 1991; Giles et al., 1987; and Shepard et al., 2001 for reviews). Originally the theory (then called Speech Accommodation Theory) was developed to explain how people alter speech and vocalic patterns during interaction (Giles, 1973). Later, the theory was expanded to include a more diverse assortment of nonverbal behaviors, including gaze and smiling (e.g., Gallois, Giles, Jones, Cargile, & Ota, 1995). Studies have shown that principles of accommodation help explain intercultural interaction (e.g., Gallois et al., 1995; Giles et al., 1991), communication between people of unequal status (e.g., Thakerar, Giles, & Cheshire, 1982), communication between minority groups and the larger culture (e.g., Bourhis & Giles, 1977), and sex differences in nonverbal behavior (e.g., Boggs & Giles, 1999; Mulac, Studley, Wiemann, & Bradac, 1987), to name but a few applications of the theory. Despite considerable empirical support and theoretical refinement since the theory's inception in the early 1970s, Shepard et al. (2001) noted that more work remains to be done to validate the specific details and propositions of CAT as outlined in Fig. 2.5. Given the broad applicability of CAT, the theory should continue to hold a prominent place in nonverbal research.

### **Interaction Adaptation Theory**

As a theory of social behavior, interaction adaptation theory (IAT; Burgoon, Allspach, & Miczo, 1997; Burgoon, Dillman, & Stern, 1993; Burgoon, Stern, & Dillman, 1995) places people's desires, needs, and expectations for interac-



tion in a central explanatory role. It proposes that people enter any given interaction with a mix of requirements (what they need from the interaction), expectations (what they anticipate from the interaction), and desires (what they want from the interaction). These elements can derive from a combination of biologically and socially learned imperatives. Whereas expectations typically require some socially acquired knowledge about one's conversational partner and the communication context, requirements and even desires may well be rooted in biological drives (e.g., the need for safety, the motivation to procreate) that are more universal. Thus, IAT represents a theory whose roots are in both the social learning and sociobiological paradigms.

IAT provides that requirements, expectations, and desires combine to form an *interaction position*, which is then compared to the actual behavior enacted by one's conversational partner. According to IAT, when one encounters behaviors that match one's interaction position, or behaviors that are more positive than those initially required, expected, or desired, one will be apt to reciprocate those behaviors by behaving in a similar manner. Suppose, for instance, that Jim enters a discussion with his wife about the division of the household labor expecting her to be confrontational, wanting her to be fair, and needing her not to be a physical threat. If she behaves in just this manner—or especially, if she behaves in a more positive manner, by being pleasant and effusive—IAT predicts that Jim would reciprocate her conversational behaviors by becoming more pleasant and effusive himself (see Fig. 2.6).

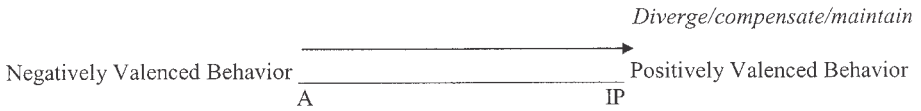
Conversely, when one encounters behaviors that are more negative than those initially required, expected, or desired, one will be apt to compensate for those behaviors by acting in an opposing manner. If Jim's wife not only behaved confrontationally (as expected) but was also being unfair and seemed as though her anger might make her a physical threat to Jim, then IAT predicts that Jim would likely compensate for these behaviors by becoming more pleasant or more docile. Such a response would, in part, be a strategic move on Jim's part to elicit more pleasant behavior from his wife in return, thereby arresting further escalation of the situation.

IAT's predictions are straightforward in contexts wherein requirements, expectations, and desires are in concert with one another. Less clear, however, are the behavioral responses predicted when, for instance, a person expects one thing but desires something completely different. For example, Jim may expect his wife to be confrontational but he may want her to be pleasant. If she behaves confrontationally, she will be confirming part of Tim's interaction position (calling for a reciprocal response) but negatively violating another part of it (calling for a compensatory response). IAT is relatively silent on the issue of the relative potency of requirements, expectations, and desires. In an experiment designed to address just such a situa-

**Interpersonal Position (IP)** = A Combination of the Receiver's Required, Expected, and Desired Elements

**A = The Sender's Actual Behavior**

**If  $IP > A$**



**If  $A > IP$**



FIG. 2.6. Predictions from interaction adaptation theory. From Burgoon, Stern, and Dillman (1995). Adapted with permission from Cambridge University Press.

tion, however, Floyd and Burgoon (1999) crossed expectations for affectionate or nonaffectionate behavior with desires to elicit either affection or the lack of it. Half of the participants wanted and expected the same thing (either high or low affection), and half of the participants wanted one outcome but expected the other. These were further crossed with the actual behavior participants experienced. IAT's predictions were confirmed for all cases in which expectations and desires were congruent with each other. In the cases of incongruent desires and expectations, Floyd and Burgoon found that participants responded to the behaviors more in line with their desires than with their expectations. In other words, those who desired affectionate behavior reciprocated it when they got it and compensated for it when they did not, irrespective of their expectations.

### The Parallel Process Model

Rather than examining patterns of reciprocity, compensation, or accommodation, Patterson's (1995, 1998, 2001) Parallel Process Model (PPM) focuses on explaining the complex process of sending and receiving nonverbal communication. Patterson developed the PPM based on a wealth of empirical research, including his earlier work on the intimacy arousal model

(Patterson, 1976) and the sequential functional model (Patterson, 1982, 1983). A central assumption of the PPM is that people are simultaneously encoding and decoding nonverbal communication during interactions. Patterson theorized that processes related to enacting behavior (encoding) and making social judgments about behavior (decoding) run on two parallel tracks (see Fig. 2.7).

According to the PPM, both social judgments and actor behavior are initially anchored in determinants that constrain the way people communicate and lead to fairly stable patterns of encoding and decoding. Patterson (1995, 1998, 2001) identified three determinants: biology, culture, and personality. Biology refers to “evolutionary pressures in shaping adaptive, hardwired patterns of communication with others” (2001, p. 163). Culture and personality modify these innate biological tendencies such that there is some universality in how people encode and decode nonverbal communication, but there is also cultural and individual variability based on socialization. People bring these three determinants with them into social environments. In addition, these determinants influence the types of social settings and partners a person chooses. Together, biology, culture, personality, and the social environment (which includes the partner and setting) provide the context for an interaction.

The interaction is then guided by a set of cognitive–affective mediators, including dispositions, goals, affect, and interpersonal expectancies. Dispositions include attitudes toward the partner or setting, as well as aspects of the personality that emerge during interaction within a particular social environment. Goals refer to “the cognitive representations of desired states for which people strive” (Patterson, 2001, p. 165), such as hoping to make a good impression on someone, trying to persuade someone to do something for you, or wanting to communicate a particular emotion. Affect reflects the emotional reaction to one’s social environment, including feelings about the partner, the situation, and one’s goals. Finally, interpersonal expectancies encompass perceptions about what will or should happen in a given social environment, as well as self-fulfilling prophecies. Patterson theorizes that these cognitive–affective mediators affect both social judgments and actor behavior. Similar to EVT, interpersonal expectancies are also directly related to attentional focus when encoding or decoding nonverbal communication, such that violations of expectations draw people’s attention toward behavior. All of the cognitive–affective mediators work together to create action schemas, or representations of how a person might act in a given social environment.

Often times, however, decoding and encoding processes are automatic. In terms of social judgments, in most situations people interpret nonverbal behavior automatically, without any conscious awareness. This automatic processing, according to PPM, is due either to innate biological tendencies or to

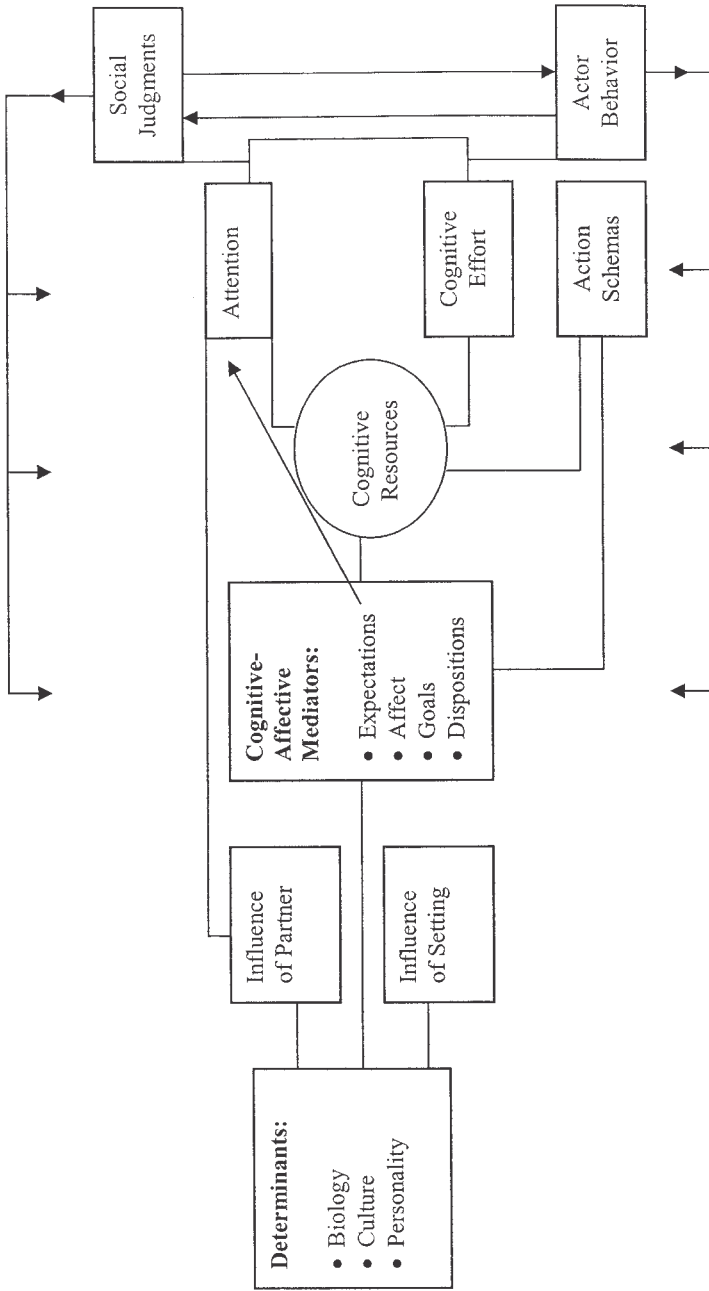


FIG. 2.7. A representation of the parallel process model. From Patterson (2001). Adapted with permission of John Wiley and Sons.

learned associations and attributions that have become second nature over time. Similarly, Patterson (2001) theorized that people typically enact behavior in an automatic, habitual pattern. As he put it, “On the automatic end, our behavioral repertoire encompasses a wide range of basic, hardwired patterns of approach and avoidance that have undoubtedly been selected over the course of evolution” (p. 169), as well as behaviors that became automatic as a result of social learning. When automatic processing takes places, the determinants of biology, culture, and personality are particularly likely to constrain how people encode and decode nonverbal behavior.

On the other hand, Patterson (1995, 1998, 2001) acknowledged that there are times when people send and receive information in a more controlled fashion. For example, Tina and David might be particularly cognizant of their own actions (and well as each other’s actions) on a first date because they are concerned about making good impressions. Although many goals, such as that of making a good impression, are pursued in a relatively automatic fashion, adjustments sometimes need to be made for specific goals to be met. Such adjustments are particularly likely to occur when people are highly motivated (e.g., David really wants Tina to like him) or when information is inconsistent (e.g., Tina tries to makes sense of the fact that David seemed outgoing when they first met but now seems shy on their date). Making adjustments takes cognitive effort, which requires cognitive resources. Thus, Patterson (1998, 2001) theorized that if an individual does not have enough cognitive resources at her or his disposal to make appropriate adjustments, the interaction will likely continue in an automatic or habitual fashion. Moreover, if an individual is too focused on encoding, she or he may not have as many cognitive resources at hand for decoding. In PPM, sending and receiving nonverbal communication are regarded as complementary processes that follow parallel tracks, but the limited availability of cognitive resources may lead to a more controlled handling of one process than the other.

The PPM provides a promising new way to understand how both biology and social learning, as well as affect and cognition, work together to influence how people encode and decode nonverbal communication. Like CVT, the theory also provides a mechanism for understanding interactions—why some interactions unfold automatically while others require more careful processing. Further research aimed at testing some of the specific principles forwarded in PPM will shed further light on the utility of this model.

## SUMMARY

The bio-evolutionary and sociocultural paradigms provide different yet complementary explanations for nonverbal communication. As Burgoon, Buller, and Woodall (1996) argued, nonverbal communication has phyloge-

netic and ontological primacy over verbal communication. That is, nonverbal behavior predates language in our evolutionary history, and children learn to communicate through nonverbal means (e.g., crying, smiling) before they can use words. According to the bio-evolutionary paradigm, heritable traits related to survival and reproductive fitness are passed from generation to generation. This process of natural selection shapes people's perceptions, preferences, and behaviors, including those related to affiliation, attachment, altruism, dominance, and sexuality. The paradigm helps explain cultural similarity in nonverbal expression as well as sex differences that emanate from biology and differential parental investment. In contrast, the sociocultural paradigm is rooted in the idea that most nonverbal communication is learned rather than innate. Social learning occurs through a variety of processes, such as modeling and reinforcement. The social meaning model further specifies that within a given culture or cocultural group, some nonverbal behaviors have consensual social meaning and are therefore interpreted similarly by senders and receivers. Other behaviors are more ambiguous, with individual, relational, and contextual factors needed to decode meaning accurately.

The relationships between biological forces, social learning, and behavior are evident when reviewing theories related to the exchange of nonverbal communication. EVT tends to emphasize social learning since expectations develop based on personal observation, cultural knowledge, direct instruction, and relationship factors. Similarly, expectancy violations are evaluated based on the rewardingness of the partner and the valence of the violation—judgments that require social and cultural knowledge. Nonetheless, the tendency to react differently to rewarding versus unrewarding individuals may have evolved as a survival mechanism for humans. CAT also emphasizes social learning, with cultural and social factors influencing whether people converge or diverge to another person's communication style. Moreover, the sociohistorical context acts as a frame that influences accommodation tendencies. DAT, in contrast, tends to favor biology, with patterns of approach and avoidance theorized to occur rapidly and almost automatically. Arousal is featured prominently as a causal mechanism that mediates the relationship between discrepancy and both affective and behavioral reactions. However, the notion of discrepancy is consistent with a social learning perspective in that people compare actual behavior with expected behavior, with expectations developed through past experiences and social knowledge.

The remaining theories all emphasize both biology and social learning. In CVT, biology is instrumental in predicting responses to increased immediacy that lead to high or low levels of arousal change. While low levels of arousal change are unrelated to emotion and do not require a behavioral response, high levels of arousal are theorized to be emotionally aversive

and to trigger an automatic flight or flight response. However, when arousal change is moderate, a host of cognitive schemata (many of which are based on social learning) are activated to help a person evaluate and react to a partner's increased immediacy. IAT also includes both biological and cultural-social factors in determining a person's interactional position. Required elements are strongly influenced by biological forces. Expectations are developed based on cultural norms, social prescriptions, and individualized knowledge. Finally, desires reflect a combination of goals, likes, and dislikes that often originate in one's innate temperament but are modified by social learning. Finally, the PPM includes biology, culture, and personality as the three major determinants of nonverbal communication. The model also specifies conditions under which the encoding and decoding of nonverbal behavior will be mindful rather than automatic. When processing is mindful, cognitive-affective mediators such as dispositions, goals, affect, and expectancies play an especially key role in predicting behaviors and interpretations. Thus, the reasoning behind the PPM suggests that both biology and social learning play important roles in directing the sending and receiving of nonverbal communication, but depending on the situation, one of these factors may be more influential than the other.

As a whole, the paradigms and theories discussed in this chapter illustrate the complexity of nonverbal interaction. Nonverbal communication is a product of biology, social learning, and relational context, and all of these factors must be considered when trying to explain patterns of nonverbal communication within relationships. At another level, however, nonverbal behavior represents a basic form of communication that has phylogenetic and ontogenetic primary, and is therefore foundational to social interaction.

## Interpersonal Attraction

*David wasn't really looking for love. After a hectic week at school, he was just looking forward to kicking back with some of his friends at the local watering hole, watching some basketball and blowing off some steam. He wasn't even there 20 minutes when someone caught his eye in a way that made him forget about his plans altogether. Tina had stopped in with a few of her colleagues from work for the same reason that David and his pals gathered—to relax, loosen up, and enjoy a Friday afternoon. From the moment David saw her, though, he couldn't take his eyes off of her. It didn't take long before Tina noticed his attention, and shortly thereafter, both were wondering how they could break free from their friends long enough to meet.*

Humans are keenly aware of attraction and its emotional, cognitive, and visceral effects—and for good reason. The formation of personal relationships is often dependent on the existence of some form of attraction. Without attraction to motivate initial interaction, many potentially fulfilling relationships might simply be foregone. It was a strong sense of attraction that led David and Tina to want to meet; without that motivating force, they may never have made the effort to connect. An understanding of what attraction is, why it is so powerful, and what leads to it, therefore, is essential in understanding how humans relate to one another.

We begin this chapter by discussing why attraction—and attractiveness—are so important to individuals and their relationships. We review research that indicates that attractive people are benefited in numerous ways and penalized in others, and we describe how people tend to seek relational partners who approximate their own level of physical attractiveness. We



then discuss numerous aspects of the body and face that are associated with perceived physical, olfactory, and vocal attractiveness. In this section, we note that although some markers of attractiveness vary from culture to culture or from era to era, many are consistent cross-culturally and historically. Finally, we discuss the process of communicating attraction through flirtation and courtship cues; these behaviors often serve as a first step in relational development for romantic couples.

## THE IMPORTANCE OF ATTRACTIVENESS

We have noted that the formation of relationships often depends on some form of attraction, but why is that the case? In this section, we discuss two reasons why attractiveness is so important: the first is that attractiveness elicits many types of positive evaluations from others, and the second is that humans evaluate attractiveness (and, in particular, relative attractiveness) when forming pair bonds. We address each of these effects below.

### Halo Effect

The halo effect is the propensity to attribute positive qualities to physically attractive people, and several studies have attested to its robustness. In a now classic experiment, Dion, Berscheid, and Walster (1972) showed participants photographs of highly attractive, average looking, and unattractive people and asked them to offer their own assessments of the stimulus persons' values and virtues. When Dion and colleagues compared these assessments across the three attractiveness conditions, the results revealed a clear and consistent pattern: the more attractive the models were, the more favorably participants evaluated them.

Specifically, attractive models were perceived to be more socially desirable, more likely to be successful professionally, more likely to have happy marriages (see also Kirkpatrick & Cotton, 1951), and more likely to be good parents than were the less attractive models. Several other investigations have also demonstrated the preferred status that accompanies physical attractiveness. Voters prefer attractive candidates to unattractive ones (Efran & Patterson, 1974), and teachers prefer attractive students to unattractive ones (Clifford & Walster, 1973). In simulated trials, attractive defendants receive lighter hypothetical sentences for the same crime than do unattractive defendants (Efran, 1974). Attractive applicants are advantaged over equally qualified but less attractive applicants in job interviews (Watkins & Johnston, 2000), in salaries (Hamermesh & Biddle, 1994), and in college admissions decisions (Shahani-Denning, Dipboye, & Gehrlein, 1993), although the latter study demonstrated this effect only for women. Attractive people

are viewed as having better social skills (Kuhlenschmidt & Conger, 1988), as being more competent at their jobs (Shapiro, Struening, Shapiro, & Barten, 1976), and as possessing leadership skills that others lack (Cherulnik, 1989). Attractive individuals elicit more cooperation from others (West & Brown, 1975), are rewarded more often (Raza & Carpenter, 1987), and have more positive interpersonal interactions (Langlois, Roggman, & Rieser-Danner, 1990). They are better adjusted (Cash & Smith, 1982), have higher self-esteem (O'Grady, 1989), have more dating experience (Curran & Lippold, 1975), and are more outgoing (Garcia, Stinson, Ickes, Bissonette, & Briggs, 1991). Even in American films, attractive characters are portrayed more favorably than are unattractive characters on a variety of dimensions (Smith, McIntosh, & Bazzini, 1999).

Recent research has qualified the robustness of the halo effect, however. In the 1980s, Dion suggested that attractiveness should show stronger associations with some dimensions of personality than with others. Specifically, she proposed that the halo effect should be strongest for measures of social competence and interpersonal ease (Dion, 1981, 1986; see also Bassili, 1981). Two meta-analyses of the beauty-is-good literature have supported this contention. The first, by Eagley, Ashmore, Makhijani, and Longo (1991), included 76 studies of North American populations and found that the effects of physical attractiveness were strongest for people's perceptions of social competence (mean weighted effect size, or  $d = .68$ ) and adjustment ( $d = .52$ ). By comparison, Eagley et al. found that attractiveness had only moderate effects on people's perceptions of intellectual competence and potency (dominance and self assuredness), and near zero effects for integrity and concern for others.

A second meta-analysis, conducted by Feingold (1992), included 30 studies of North American populations and examined different categories than were examined by Eagley et al. (1991). Many of the results were similar to the earlier meta-analysis. Feingold reported the strongest associations between attractiveness and perceptions of social skill ( $d = .88$ ), sexual warmth ( $d = .78$ ), dominance ( $d = .54$ ), and mental health ( $d = .50$ ). He also found moderate associations with perceived intelligence and modesty, and a near-zero association with character. The two meta-analyses were also consistent in two other findings: both showed that the bias toward attractive people was equally as strong for male and female raters, and also for male and female targets. In sum, however, both Feingold and Eagley et al. demonstrated that the halo effect is more potent for some types of judgments than for others. The similarities in their findings are notable, given that only 14 studies were included in both meta-analyses (see Ashmore & Longo, 1995).

There is also evidence that attractiveness may exert different effects in some cultures than in others. Wheeler and Kim (1997) had a sample of Korean undergraduates rate a series of photographs of attractive and unat-

tractive people along the same dimensions included in the Eagley et al. (1991) and Feingold (1992) meta-analyses. When they compared the effect sizes from their study to those reported by Feingold and Eagley et al., Wheeler and Kim found that the Korean sample produced stronger effect sizes for social competence, adjustment, intellectual competence, sexual warmth, integrity, and concern for others. The Korean sample produced weaker effect sizes for modesty and potency. By comparison, an earlier study by Dion, Pak, and Dion (1990) found that Canadian ethnic Chinese who strongly identified with the Chinese community stereotyped on the basis of physical attractiveness significantly less than did Canadian ethnic Chinese who identified primarily with the Canadian community.

Finally, not all research has found attractiveness to be a benefit. One of the most notable findings from the Eagley et al. (1991) meta-analysis was that attractive people, in addition to being judged as more socially and intellectually competent, potent, and adjusted, are also judged as being more vain and less modest ( $d = .67$ ). Similarly, in a study of workplace performance appraisals, Shahani-Denning and Plumitallo (1993) found that supervisors were most likely to attribute the failures of attractive employees to internal causes (e.g., lack of effort), whereas they were most likely to attribute the failures of unattractive employees to external causes (e.g., bad luck).

One of the biggest reasons why attractiveness is important is that it often instigates relational communication. That is, initial attraction from one person to another is frequently the precursor to actual interaction, whereas a lack of attraction may preclude people from taking any steps toward relational development. However, people use attractiveness in a somewhat counterintuitive way when they are looking for new relational partners; instead of seeking out the most attractive potential partners, humans tend instead to seek partners who represent relative equity in attractiveness. This pattern, known as the matching hypothesis, is described below.

### **Matching Hypothesis**

Given the extent to which humans find physical attractiveness to be rewarding, one might logically expect people to systematically seek romantic partners who are maximally attractive. Except for people who are maximally attractive themselves, however, such a strategy would likely be counterproductive in the long run, for at least two reasons. First, large discrepancies in attractiveness may lead a disproportionate number of relational advances to be rejected. Second, relationships between partners who are highly discrepant in attractiveness might be disproportionately likely to fail due to dissatisfaction on the part of the more attractive partner and heightened jealousy and possessiveness on the part of the less attractive partner.

Instead, it appears that humans seek partners for long-term relationships who approximate their own level of physical attractiveness. This pattern has come to be known as the *matching hypothesis* (see Adams & Crossman, 1978), and a number of empirical investigations have demonstrated it. For instance, Murstein (1972) showed participants photographs of 197 engaged or seriously dating heterosexual couples and asked participants to rate the attractiveness of the men and women in the photos. He then calculated attractiveness differential scores for each pair and compared them to the attractiveness differential scores for randomly paired men and women. In support of the matching hypothesis, Murstein found greater similarity in physical attractiveness (i.e., lower attractiveness differentials) for real life couples than for the randomly created ones (see also Price & Vandenberg, 1979).

Not only do people seek similarly attractive others as relational partners, but there is evidence that couples who are matched on attractiveness are also more successful than those in which one partner is substantially more attractive than the other. White (1980) studied 123 dating couples at the beginning of their relationships and found that those who were the most closely matched in attractiveness were also the most likely to still be dating nine months later. Similarly, Zajonc, Adelman, Murphy, and Niedenthal (1987) found that similarity in attractiveness levels in married couples significantly predicted the spouses' reports of their marital satisfaction. Zajonc et al. also had 110 undergraduate participants look at individual photographs of the men and women whose marital satisfaction they had measured, and asked the participants to guess which men were married to which women. However, Zajonc and colleagues showed the undergraduates two photos of each man and woman: one taken at the start of their marriage and one taken 25 years later. In line with the folk notion that spouses grow to look alike, the participants were more accurate in matching the photos of the couples that were taken after 25 years of marriage than the photos taken at the start of the marriages.

These studies demonstrate that, when seeking relational partners, not only do people look for others who are similar in their level of attractiveness, but they are more likely to have relational success by doing so, all other things being equal. Indeed, after a detailed review of research on the physical attractiveness of marital and long-term dating partners, Patzer (1985) concluded that evidence supporting the matching hypothesis is conclusive (see also Berscheid, Dion, Walster, & Walster, 1971). Although most research testing the matching hypothesis has focused on romantic relationships, there is evidence that it extends to platonic same-sex friendships as well as romantic pairs (Cash & Derlega, 1978).

Thus far, we have discussed the importance of attractiveness for individuals and their relationships. This discussion naturally raises the question of

what makes people attractive to others. In the next section, we review research on several markers of attractiveness, many of which have been shown to have cross-cultural and cross-historical applicability. Allow us to offer two caveats beforehand. First, we have not provided an exhaustive list of attractiveness markers, but rather, a review of those most commonly studied in research on humans. Second, few, if any, of these markers operate in isolation. Instead, highly attractive people often manifest many of these physical characteristics.

## MARKERS OF PHYSICAL ATTRACTIVENESS

The common notion that “beauty is in the eye of the beholder,” which dates back at least to the third century, BC (Rubenstein, Langlois, & Roggman, 2002), suggests that attractiveness is purely a subjective matter of individual taste. In other words, what one person finds beautiful will not necessarily appeal to another. If this idea were true, we would expect to find very little agreement from person to person, and from culture to culture, in what is physically attractive and unattractive, and this would suggest that any efforts to study beauty in a systematic, quantifiable manner would be in vain.

In fact, considerable research suggests that just the opposite is true: humans show substantial agreement in what they find physically appealing, and many of our judgments about beauty show consistency across cultures and even across time periods. In his now classic study, for instance, Buss (1989) found substantial consistency across 37 cultures in what people found attractive in members of the opposite sex. A recent meta-analysis conducted on 130 samples of attractiveness ratings from 94 studies produced similar results (Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000). Langlois et al. reported that, across the studies in their meta-analysis, within-culture agreement on adults’ attractiveness was .90, and cross-cultural agreement was .94, indicating strong levels of consistency both within and across cultures in perceptions of physical attractiveness.

It was no coincidence that David and Tina’s initial attraction to each other was based on visual cues. They sparked each other’s interest by the way each of them looked to the other, an interest without which they may never have made the effort to meet and discover additional points of attraction about each other. In this section, we will review a number of markers of physical attractiveness—those characteristics of the body and the face that are systematically associated with perceived attractiveness. Of course, not all aspects of beauty are cross-cultural or cross-historical; there is cultural and temporal variation in preferences for body types and various forms of adornments and bodily mutilation, for instance. We will review research on these and other markers of attractiveness in this section, and we will make

note of those markers for which research has demonstrated cross-cultural and cross-historical applicability and those for which it has not.

## Body Attractiveness

Several aspects of the body are implicated in physical attractiveness. In this section, we discuss the contributions of body type, symmetry and proportionality, waist-to-hip ratio, height, and bodily mutilations to perceptions of physical attractiveness. Some, like weight, can be altered (at least, with some effort) to make people more or less attractive. Others, like height or symmetry, are less amendable and contribute to the wide variation in physical attractiveness found from person to person.

**Body Type.** Body type concerns a person's relative height and weight. The process of classifying people according to their body type is called *somatyping*. In his pioneering research, Sheldon (1940, 1954; Sheldon, Stevens, & Tucker, 1942) proposed that there are three basic body types: endomorphic, mesomorphic, and ectomorphic. The endomorphic body carries too much weight for its height. The ectomorphic body is underweight for its height. The mesomorphic body represents a balance between height and weight. Somatyping relies on a body's relative height and weight, not its absolute height or weight. A man who is 5' 10" and 180 pounds would be classified as a mesomorph, whereas a man of the same weight who is 5' 2" would be classified as an endomorph.

Preferences for specific body types vary culturally, particularly for women. In cultures in which nutrition is good and food is relatively abundant, such as those in North America and Western Europe, a thin (mesomorphic or ectomorphic) body type is preferred (Symons, 1979), partly because calories are plentiful and physical exertion is, to a large degree, optional.<sup>1</sup> Therefore, maintaining a mesomorphic or ectomorphic body type requires time and at least some measure of resources. (The diet industry in the United States alone is a multi-billion dollar annual enterprise.) By contrast, in cultures in which food is scarce and nutrition is poorer, including the Australian Bushmen and some African cultures, a more plump (endomorphic) body type is preferred. In Nigeria, for instance, a new bride-to-be is placed on a special diet to increase her body weight in preparation for her wedding, and oils are rubbed on her body to emphasize her girth. In both cases, the preference is for the type of body that is more difficult to at-

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<sup>1</sup>Some research has also shown that ethnic groups within the same culture may vary in their body type preferences. Cunningham, Roberts, Barbee, Druen, and Wu (1995), for instance, found that black Americans rated heavier women as more attractive than did white Americans.

tain. In food-poor cultures, for instance, plumpness is a sign of wealth and access to resources, whereas in food-rich cultures, thinness signals that one has the time and resources necessary to exercise regularly. Thus, while the preferences for specific body types differ, the preference for bodies that signify access to resources appears to be more constant.

**Body Symmetry.** Among the most truly universal predictors of body (and facial) attractiveness is symmetry, or the extent to which two sides of a face or body mirror each other. Environmental stressors, such as parasites, pollutants, and extreme temperatures, and genetic problems, such as recessive genes and homozygosity, experienced during development cause individuals to exhibit what is known as *fluctuating asymmetry* (FA), or deviations from exact symmetry on bodily features that tend to be symmetrical (Livshits & Kobylansky, 1991; Møller & Pomiankowski, 1993). FA is ascertained by taking precise measurements of physical features such as the width of the feet, the breadth of the elbow, and the length of the ear on one side of the body and comparing them to the same measurements taken from the opposite side. Larger discrepancies in such measurements signal higher FA. Only the most genetically fit individuals can maintain symmetric development under stress; therefore, symmetry serves as a marker of genetic quality (Møller, 1997; Møller & Thornhill, 1997; Trivers, Manning, Thornhill, Singh, & McGuire, 1999). FA scores tend to be randomly distributed within populations (Van Valen, 1962).

Humans—and indeed, many other species—are drawn to symmetry, even subconsciously, because symmetrical bodies are more likely than asymmetrical bodies to be free of infections and genetic defects. Parasites, diseases, and genetic abnormalities often manifest themselves in ways that produce asymmetries in the face or body; symmetry is thus an important sign of physical health. In fact, facial and body symmetry are directly associated with genetic, physical, and mental health, as well as with cognitive ability and IQ (see Furlow, Armijo-Prewitt, Gangestad, & Thornhill, 1997; Shackelford & Larsen, 1997; Thornhill & Møller, 1997). Symmetry is attractive, therefore, partly because offspring resulting from sex with a symmetrical partner will be more likely to survive to reproductive maturity than will the offspring of asymmetrical parents.

Indeed, body symmetry appears to exert direct influences on reproduction. Thornhill and Gangestad have studied its effects in several investigations by measuring fluctuating asymmetry. In one study, Thornhill and Gangestad (1994) measured FA in 122 male and female heterosexual undergraduate students and then asked the participants to report on the numbers of sexual partners they had had. The researchers hypothesized that asymmetry would be inversely related to the number of sexual partners; in other words, people with more symmetrical bodies would report having



had more partners. After controlling for the confounding effect of participants' ages, Thornhill and Gangestad found that, as expected, FA scores were inversely associated with numbers of sexual partners for both women and men (see also Gangestad & Thornhill, 1997; Manning, Scutt, Whitehouse, & Leinster, 1997; Møller & Thornhill, 1998).

In a later study, Thornhill, Gangestad, and Comer (1995) asked 86 sexually active heterosexual couples to report on the females' propensity to achieve orgasm during intercourse. The researchers measured both partners in each dyad for their level of FA and then regressed the partners' reports of the females' orgasms (as a percentage of copulations) on the males' asymmetry scores. The results indicated a direct relationship between men's body symmetry and the likelihood of their partners reaching orgasm. No other variables measured in the study—which included the man's attractiveness, height, earnings, and sexual experience, and the couple's ratings of their mutual love—predicted the women's likelihood of achieving orgasm. This is significant for reproduction because when a woman has an orgasm during sexual intercourse, more of her partner's sperm is retained in her reproductive tract, thus increasing the likelihood that she will become pregnant (see, e.g., Baxter & Bellis, 1993; Singer, 1973; Smith, 1984). Therefore, sperm from highly symmetrical men are more likely to be passed on to succeeding generations than are sperm from less symmetrical men.

**Body Proportionality and  $\phi$ .** In addition to their basic symmetry, attractive bodies also have attractive proportions, which is the length or size of one physical feature relative to another. In particular, research suggests that attractive bodies manifest a specific proportion in several of their features. That proportion, known alternately as the Golden Ratio, the Divine Proportion, or simply as  $\phi$  (Phi), is 1 to 1.618, and it is attributed to the Greek philosopher and mathematician Pythagoras, who first made note of its association with physical beauty (Huntley, 1970; Livio, 2002).<sup>2</sup>

In physically ideal bodies, for instance, the distance from the navel to the bottom of the feet is 1.618 times the distance from the navel to the top of the head, and the distance between the navel and Adam's apple is 1.618 times the distance from the Adam's apple to the top of the head. The distance from the top of the head to the elbow is 1.618 times the distance from the elbow to the tip of the middle finger, and the distance from the elbow to the wrist is likewise 1.618 times the distance from the wrist to the tip of the middle finger. In the hands, moreover, the length of each phalange, or finger bone, is 1.618 times the length of the adjacent one, as one moves from the palm to the fingertip (JCO Interviews, 2002).

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<sup>2</sup>Specifically,  $\phi = (1 + \sqrt{5}) / 2$ .



The phi ratio recurs with notable frequency in all forms of beauty, not just human physical beauty. The adjacent chambers of the chambered nautilus shell (*Nautilus pompilius*), for instance, increase in width by a factor of 1.618. The arrangement of petals in a rose and the arrangement of seeds on a sunflower both follow phi angles (Livio, 2002). The ratio also features prominently in human-made beauty, such as art, music, and architecture (Huntley, 1970). Some have suggested, in fact, that humans are genetically encoded to appreciate the phi ratio, given its notable recurrence in multiple forms of beauty (see Ricketts, 1982).

**Waist-to-Hip Ratio.** Despite cultural variation in preferences for body types, one aspect of the female body type appears to be nearly universal in its association with attractiveness. This is the ratio of waist width to hip width, or waist-to-hip ratio (WHR). Across cultures, and even across time in Western cultures, the preferred WHR has been approximately .70—that is, women are seen as most attractive when their waists are about 70% the width of their hips (see, e.g., Singh, 1993; Singh & Luis, 1995; Singh & Young, 1995). It is the ratio, rather than the absolute measurements, that matters. Both Audrey Hepburn (at 31.5-22-31) and Marilyn Monroe (at 36-24-34) had a .70 WHR, as do Sophia Loren, Elle Macpherson, and Kate Moss. Even the 2,500-year-old stone Venus sculptures found in Europe and Asia conform to this ratio. In a study examining the body measurements of all of the Miss America winners from 1923 to 1987, Singh (1993) found that every single Miss America had a WHR between .69 and .72. He also analyzed the body measurements of *Playboy* centerfolds from 1955–1965 and 1976–1990 and found that their WHR ranged only from .68 to .71 (see also Garner, Garfinkel, Schwartz, & Thompson, 1980; Mazur, 1986). A later study by Singh and Luis (1995) demonstrated cross-cultural applicability for the .70 WHR.

The cultural and temporal consistency in preferences for WHR suggests that the preference is more than a culturally or socially constructed artifact. Indeed, there is a compelling reason why the WHR of .70 is seen as maximally attractive: it is the WHR of maximum fertility. In infancy and early childhood, males and females have similar distributions of body fat. After puberty, however, the differential effects of androgen and estrogen hormones cause the sexes to diverge in their patterns of body fat distribution. Specifically, androgens such as testosterone stimulate the accumulation of body fat in the abdominal region, whereas estrogens lead to body fat accumulation in the gluteofemoral region (thighs and buttocks). WHR serves as a reliable index of the distribution of fat between the upper and lower body and also of the relative amounts of intra-abdominal and extra-abdominal fat (see Ashwell, Cole, & Dixon, 1985; Deprés, Prudhomme, Poulouit, Tremblay, & Bouchard, 1991).

WHR is an important indicator of female fertility, for at least two reasons. First, gluteofemoral fat provides essential energy for fetal development and for continued nourishment of a child after birth. Women not only need a greater amount of stored fat than men to provide for their reproductive needs, but they also need their body fat to be available preferentially during pregnancy and lactation. Research by Björntorp (1987, 1991) and Rebuffé-Scrive (1987) has indicated that gluteofemoral fat is used nearly exclusively during pregnancy and lactation. Second, a low WHR corresponds to the absence of major obesity-related diseases, including diabetes (Barbieri, 1990; Björntorp, 1988), carcinomas (Lapidus, Helgesson, Merck, & Björntorp, 1988), heart disease and stroke (Larsson, 1985; Raison & Guy-Grand, 1985), and gallbladder disease (Hartz, Rupley, & Rimm, 1984).

Research has indicated that a WHR close to .70 corresponds to maximum fertility. In a study of 500 Dutch women attending a fertility clinic, Zaadstra, Seidell, van Noord, te Velde, Habbema, Vrieswijk, and Karbaat (1993) found that women who had a WHR under .80 were more than twice as likely to get pregnant following twelve rounds of artificial insemination as were women with ratios over .80. Higher WHR is also directly associated with married women's difficulties in becoming pregnant and with their age at first delivery (Kaye, Folsom, Prineas, Potter, & Gapstur, 1990). Lower WHR corresponds to greater circulating estrogen (Krotkiewski & Björntorp, 1978; Tonkelaar, Seidell, van Noord, Baander-van Halewijn, & Ouwehand, 1990) and lower circulating testosterone (Kirschner & Samojilik, 1991; Rebuffé-Scrive, Cullberg, Lundberg, Lindstedt, & Björntorp, 1989).

These data support the conclusion that a preference for a WHR around .70 in women is genetically motivated. Because the .70 ratio is a sign of maximal fertility, those men who are attracted to women with such a ratio—and mate with them—are the most likely to produce healthy offspring who will inherit the preference for a .70 WHR. For men, the ideal waist-to-hip ratio appears to be closer to 1.0. Across various cultures, women evaluate men's bodies more favorably when they have broad shoulders and hips that are about the same width as their waists (Asthana, 2000; Buss, 1989, 1994). However, WHR appears to be a more important indicator of attractiveness when judging women's bodies compared to men's bodies.

**Height.** Whereas the relationship between WHR and body attractiveness is especially important for women, height is a physical trait whose association with attractiveness is largely confined to men. Although actual height differentials vary cross-culturally, human males are, on average, taller and heavier than human females are (Barber, 1995; Gould & Gould, 1989). For instance, American men stand an average of five to six inches taller than do American women (Gillis & Avis, 1980; Ross & Ward, 1982).

Several studies suggest that male height is attractive to women, translating into romantic and reproductive success. For example, women prefer taller men to shorter men as dating partners (Sheppard & Strathman, 1989) and are more likely to respond to the personal ads of taller men (Lynn & Shurgot, 1984). In their study using medical records from nearly 4,500 Polish men, Pawlowski, Dunbar, and Lipowicz (2000) found that taller men were more likely to be successfully married and were more likely to have children; in fact, they reported that each meter increase in stature equated to having one more offspring over the life course.

Taller men are also advantaged in their professional lives. Compared to shorter men, for instance, taller men are more likely to be hired for jobs, are offered higher starting salaries, and attain higher professional status (Feldman, 1975; Jackson, 1992). Taller political candidates are routinely preferred by voters over shorter ones (Gillis, 1982). The beneficial effects of height are not limited to adults. Even children favor taller comrades in the allocation of resources (Graziano, Musser, Rosen, & Shaffer, 1982), whereas mothers rate 1- to 2-year-old boys as more competent if they are taller, even when the effect of the children's perceived age is controlled for (Eisenberg, Roth, Bryniarski, & Murray, 1984).

**Body Mutilations.** The quest for attractiveness has, during particular time periods and in particular cultures, given rise to practices that involve the systematic mutilation of body parts in order to change their size or shape. During the Sung dynasty in China (AD 960–1280), for instance, the practice of foot binding became commonplace. When a girl was around three years old, all but the first toe on each of her feet were broken and her feet were bound with strips of cloth that were tightened over the course of two years. The purpose was to keep the feet from growing any longer than ten centimeters long and to bend the soles of the feet into extreme concavity (see Dawson, 1978; Levy, 1966). Of course, such a practice severely interfered with women's ambulatory abilities and also compromised their balance and bone density (Cummings, Ling, & Stone, 1997).

Whereas both foot binding was meant to minimize the size of a particular physical feature, other body-mutilation practices have sought instead to emphasize particular physical characteristics. One example is the practice of wearing lip plates. The Mursai of southern Ethiopia and the Mebêngôkre Indians of Brazil share this practice, which involves piercing young girls' lips and inserting a large clay or wooden disk into the hole. As girls grow older, their lip plates are increased in size, sometimes reaching ten inches in diameter. When girls reach sexual maturity, the size of their lip plates sets the price of their dowries. The larger a girl's lip plate, the more head of cattle her family will receive from the family of her groom (Dutilleul, 1994).

A similar practice, common among the Padaung of Burma, is for women to wear metal rings around their necks to exaggerate the length of their necks. Padaung females receive their first neck rings at approximately the age of five, and from that point on, the number of her rings and the corresponding length of her neck are a sign of status (much like the size of the lip plate is for the Mursai and Mebêngôkre). Although the effect of the neck rings is to create the appearance of an extended neck, the neck is not actually stretched in length; rather, the shoulder blades are pushed down to create the visual effect.

Although the culturally sanctioned reasons for these practices vary, all of these practices exaggerate youth and the lack of testosterone. Small feet and large lips are both associated with youth, and long necks are associated with abundance of estrogen and a lack of testosterone. (Similarly, the Victorian practice of wearing corsets exaggerated the smallness of the waist, relative to the hips, which also mimics a lack of testosterone; see Summers, 2001.) Because age and testosterone both reduce women's fertility, these types of mutilations translate into signals of high female fertility (see Barber, 1995).

In the preceding paragraphs, we have reviewed several of the most important body characteristics that are associated with physical attractiveness. We have separated these from our discussion of facial attractiveness, because although the face is certainly a part of the body, it tends to exert its own influence on perceptions of attractiveness. Below, we discuss the contributions of facial symmetry and proportionality, neoteny, koinophilia (or averageness), facial hair, and pupil size to perceived facial attractiveness. Although the face and body share some markers of attractiveness, such as symmetry and proportionality, other markers are unique to facial attractiveness.

## **Facial Attractiveness**

Like body attractiveness, facial attractiveness seems to be less a matter of individual taste than a function of specific characteristics that exert relatively consistent influence. Evidence for this assertion comes from the meta-analysis conducted by Langlois et al. (2000), which found that within-culture ratings of adults' facial attractiveness (88 samples rated by 1,694 participants) had a reliability coefficient of .90, and that within-culture ratings of children's facial attractiveness (28 samples rated by 1,182 participants) had a reliability coefficient of .85 (see also Cunningham, Barbee, & Philhower, 2002). A number of investigations have also demonstrated that facial attractiveness is judged consistently across cultures. In particular, consistencies in judgments of facial attractiveness were shown by whites, blacks, and Chinese evaluating white and Chinese males and females (Bern-

stein, Tsai-Ding, & McClellan, 1982); white South Africans and Americans judging white males and females (Morse, Gruzen, & Reis, 1976); Chinese, Indian, and English females judging Greek males (Thakerar & Iwawaki, 1979); whites, Asians, and Hispanics judging whites, blacks, Asians, and Hispanics (Cunningham, Roberts, Barbee, Druen, & Wu, 1995); Cruzans and Americans judging white males and females (Maret & Harling, 1985); and white, blacks, and Koreans judging whites, blacks, and Koreans (Zebrowitz, Montepare, & Lee, 1993). Additional support for the idea that perceptions of attractiveness are not entirely culturally bound is found in the work of Langlois and colleagues (Langlois, Ritter, Roggman, & Vaughn, 1991; Langlois, Roggman, Casey, Ritter, Rieser-Danner, & Jenkins, 1987; Langlois, Roggman, & Rieser-Danner, 1990), which has demonstrated that infants stare for longer periods of time at attractive as opposed to unattractive faces and respond more positively to attractive rather than unattractive adults.

In this section, we address aspects of the face that have demonstrated reliable association with perceived attractiveness. We begin by discussing facial symmetry and proportionality, and then address the influences of a youthful and average appearance, the effects of facial hair, and the effects of pupil size.

**Facial Symmetry, Proportionality, and  $\phi$ .** Humans are drawn to symmetrical faces for the same reason they are drawn to symmetrical bodies: symmetry signals genetic fitness. A number of studies have demonstrated that symmetrical faces are perceived as being more attractive than asymmetrical faces. Some of these studies have measured symmetry in real faces. Grammer and Thornhill (1994), for instance, measured the symmetry of male and female faces and correlated the scores with people's perceptions of the attractiveness of those faces. They found that symmetry was linearly related to perceived attractiveness for both female and male faces. Scheib, Gangestad, and Thornhill (1999) demonstrated the same relationship between symmetry and attractiveness for male faces, whereas Mealy, Bridgestock, and Townsend (1999) found that facial symmetry predicted ratings of attractiveness even for male and female monozygotic (identical) twins.

Other studies have manipulated facial symmetry by altering photographs of men and women's faces and ascertaining people's reactions to them. Hume and Montgomerie (2001), and Rhodes, Proffitt, Grady, and Sumich (1998), both examined symmetry by blending original faces and their mirror images to create more symmetrical versions of the original faces. Similarly, Perrett, Burt, Penton-Voak, Lee, Rowland, and Edwards (1999) manipulated facial images by retouching photographs of female and male faces to maximize their symmetry. Paralleling the findings of the studies using natural faces, all three of these investigations found that symmetrical faces were rated as more attractive than asymmetrical faces.

As with bodies in general, several aspects of attractive faces manifest proportions that approximate the phi ratio. In attractive faces, for instance, the width of the mouth is 1.618 times the width of the nose, and the width of the maxillary frontal incisor is 1.618 times the width of the maxillary lateral incisor. The width of the bridge of the nose is 1.618 times the width of the eyes, and the bottom of the maxillary frontal incisor is 1.618 times farther from the bottom of the chin than from the bottom of the nose. These proportions are significant not only for attractiveness but also for health. Those whose faces are notably disproportionate commonly suffer from ailments such as pulmonary problems or migraine headaches (see Jefferson, 1993, 1996).

**Facial Neoteny.** Neoteny is the tendency to retain juvenile physical features into adulthood. A neotenous adult face, therefore, is one that appears younger than it is; when a face is described as being boyish or childlike, it is considered neotenous. Considerable evidence suggests that some features related to facial neoteny are characteristic of attractive female faces and, to a lesser extent, of attractive male faces (see Cunningham, Barbee, & Pike, 1990). Three facial features are particularly indicative of youth: the length of the nose, the fullness of the lips, and the width of separation between the eyes. Specifically, younger faces exhibit shorter noses, fuller lips, and more widely separated eyes; as faces age, eye width decreases, the lips become thinner, and nose height increases (Jones, 1995).

In two studies, Jones (1995) demonstrated that the facial features of nose length, lip fullness, and eye width are reliably associated with attractiveness for female faces. In one study, he examined the faces of Caucasian female models displayed on the covers of *Glamour* and *Cosmopolitan* magazines (1989–1993), and compared their facial features to those of a group of age-matched Caucasian female undergraduates. Jones calculated nose length, lip fullness, and eye width for both samples and found that the faces of the models were significantly more neotenous than were the faces of the undergraduates.

In another study, Johnston and Franklin (1993) reached similar conclusions. They had participants go through a computer program that presented them with various populations of faces and then rate the attractiveness of each face. Via a genetic algorithm, which simulates the process of natural selection by retaining the features of attractive faces and eliminating the features of unattractive faces, participants each created their idealized beautiful female face. Johnston and Franklin then compared the features of these created faces with population norms to ascertain which features, in particular, were contributing to perceptions of beauty. They found that, compared to normal female faces, the idealized faces had smaller chins, shorter distances between the eyes and nose, eyes and

mouth, and mouth and chin, greater distances between the eyes and hairline, narrower mouths, and fuller upper and lower lips.

A second study by Jones (1995; see also Jones & Hill, 1993) demonstrated that the relationship between facial features and perceived attractiveness of women is not an exclusively North American phenomenon. In that study, Jones showed facial photographs of women from various populations to samples of Americans, Brazilians, Russians, the Ache Indians of eastern Paraguay, and the Hiwi of southern Venezuela. Each participant was asked to rate the photographs for attractiveness, and these ratings were compared to the nose length, lip fullness, and eye width of the subjects in the photographs. The results indicated consistent support across cultures for the idea that female faces are more attractive the more neotenous they are in terms of these three characteristics (see also McArthur & Apatow, 1983–84).

Other studies have also demonstrated that female facial neoteny is attractive cross-culturally. Perrett, May, and Yoshikawa (1994) reported that English and Japanese female faces were judged as most attractive, by raters in both countries, when they had more neotenous features. Fauss (1988) and Riedl (1990) demonstrated the same patterns with German and Austrian samples. Cunningham (1986) showed that Americans rated neotenous female faces as attractive regardless of the national origin of the face being depicted. Moreover, the same preferences for neotenous facial features have been shown to characterize homosexual men and lesbians (DeHart & Cunningham, 1993), and even heterosexual and homosexual pedophiles (Marcus & Cunningham, 2000).

It is possible, however, for a women's face to appear overly babyish (e.g., Berry, 1991). Some researchers have argued that the most attractive female face combines childlike features with mature features. For example, Cunningham (1986) showed that women were rated as the most attractive when they had the childlike facial features of large wide eyes and small noses, as well as the mature features of high cheekbones and narrow cheeks. Cunningham contended that this combination of features stimulates nurturant affection and signals sexual maturity. He also suggested that facial features such as a large smile and highly set eyebrows are attractive in women because they send messages of approachability and friendliness.

Similarly, a combination of neotenous and masculine (or mature) facial features, such as large, widely spaced eyes and a strong jawline, may be optimally attractive in men. To test this hypothesis, Cunningham et al. (1990) conducted three studies. The first used university yearbook photographs of men's faces to study the facial features women found most attractive in men. The second two quasi-experiments used black-and-white photographs of male college students. Across these studies, women preferred large and widely spaced eyes, prominent cheekbones, large chins, and wide smiles in men's faces. Cunningham and his colleagues also reported that women's



perceptions of men's attractiveness were strongly related to their selections of men to date and marry. They concluded that men who possess an attractive package of neotenous, mature, and expressive facial features may appear both masculine and approachable, with women perceiving such men "to offer the best chance for an affectionate, high-status, androgynous mate" (p. 70).

**Koinophilia.** One aspect of facial beauty involves koinophilia, which is the propensity to be attracted to faces that display average traits, as opposed to extraordinary ones (Koeslag & Koeslag, 1994). Langlois, Roggman, and Musselman (1994) clarified that average faces are not undistinguished or frequently occurring. Rather, they represent the mathematical mean. The first hint that people find facial averageness to be attractive came from research conducted by Sir Francis Galton (1878, 1883, 1888). In an effort to determine whether certain groups of people had certain facial characteristics, Galton created composite photographs by blending the faces of several people and discovered that the composite faces were more attractive than any of the individual faces that went into them. Research by Stoddard (1886, 1887) reached similar conclusions.

More than a century later, Langlois and Roggman (1990) used computer imaging to create composite facial images that represented the mathematical average of 2, 4, 8, 16, and 32 faces. They showed these composite faces, and the individual component faces that comprised them, to 300 judges who were asked to rate each face for its attractiveness. For both male and female faces, the 16- and 32-face composite faces were rated as higher in attractiveness than the mean attractiveness ratings of the component faces and as more attractive than the composites created with fewer faces. These results suggested that faces representing the central tendency of a given population are considered to be more attractive than the individual faces in that population. Rubenstein, Langlois, and Kalakanis (1999) later replicated these results with a sample of morphed female faces, and Rhodes and Tremewan (1996) replicated them with line drawings extracted from individual and composite faces.

A number of studies have demonstrated that koinophilia is a cross-cultural phenomenon. Pollard (1995) created mathematically averaged Caucasian faces and had participants from New Zealand, India, China, and Nigeria rate them for attractiveness. Despite the differences in their cultural backgrounds, participants demonstrated high levels of agreement in their perceived attraction to the composite images. Similarly, Rubenstein, Langlois, Kalakanis, Larson, and Hallam (1997) created composite Caucasian and Asian faces and had both Caucasian and Asian participants rate their attractiveness. The averaged faces from both ethnic groups were rated as most attractive by participants in both ethnic groups. Rhodes, Harwood, Yoshi-



kawa, Nishitani, and McLean (2002) identified similar findings in their experiments with Chinese and Japanese participants (see also Rhodes, Sumich, & Byatt, 1999).

Given the extent to which people are attracted to faces with symmetry, proportionality, and neotenus features, it may seem counterintuitive that people are also attracted to averageness. Koinophilia is highly adaptive, however, because people identify mutant facial traits by their rare, unusual appearance. The preference for common, average faces therefore helps humans to be vigilant about identifying potential genetic mutations that may make mating with the bearers of those mutations problematic (Koeslag & Koeslag, 1994). As a result, averageness serves as a reliable indicator of phenotypic quality (Thornhill & Møller, 1997). Moreover, Langlois et al. (1994) argued that average faces likely possess many of the characteristics that other scholars have identified as contributing to beauty, including symmetry and neoteny. In fact, their study demonstrated that koinophilia was a better predictor of facial attractiveness ratings than either of these characteristics.

**Facial Hair.** Facial hair, in the form of beards and moustaches, is a sexually dimorphic trait that emerges in men at puberty. When simply asked whether they find facial hair to be attractive on men, women have tended to indicate that they do not (Feinman & Gill, 1977). However, studies that have manipulated the presence of facial hair have found that it predicts perceptions of male facial attractiveness. For instance, Pellegrini (1973) recruited bearded undergraduates to shave off their beards in stages, until they were completely clean shaven. Pellegrini took photographs of the undergraduates at each stage of the shaving process, and later showed those photographs to male and female participants, who were asked to rate them on attractiveness. Both men and women rated the full-beard photographs as most attractive, and they also judged the bearded undergraduates to be more mature, more confident, more industrious, more creative, and more courageous than their clean-shaven counterparts. In a later study, Hatfield and Sprecher (1986) used computer-manipulated pictures of male faces as stimuli and found that people judged the faces to be more attractive as the quantity of facial hair increased (but see Cunningham et al., 1990, who found that the presence of a moustache alone was negatively related to perceived attractiveness). Given that facial hair is produced at puberty and is related to testosterone activity, it is possible that the presence of facial hair provides a cue to men's overall genetic fitness. If true, then it is logical to predict that women will be attracted to facial hair in much the same way that they are attracted to facial symmetry (see Sadalla, Kenrick, & Vershure, 1987; Thornhill & Gangestad, 1993).

**Pupil Size.** Finally, pupil size is associated with attractiveness. Pupil dilation and contraction are affected by a number of factors, including intensity of ambient light, use of stimulants or depressants, and the distance of one's object of focus. In addition, however, the sympathetic nervous system also causes pupils to dilate when one is looking at someone attractive. More specifically, pupil dilation is implicated in interpersonal attraction and pair bonding in two separate, but interrelated, ways. First, our pupils dilate when we look at someone we find attractive (Andersen, Todd-Mancillas, & DiClemente, 1980). Second, having dilated pupils makes us more physically attractive to other people, all other things being equal (Hess, 1975). Each of these processes instigates the other: a man's pupils dilate if he finds a particular woman attractive, and she therefore finds him more attractive because his pupils are dilated, which causes her pupils to dilate, which causes him to be more attracted to her, and so on.

Indeed, there is evidence that pupil dilation affects preferences for opposite-sex partners and one's assessments of them. In a 1967 experiment, Stass and Willis asked undergraduate participants which of several opposite-sex candidates (confederates) they would select as their partners for an upcoming activity. Using a drug containing neo-syneprine hydrochloride, Stass and Willis dilated the pupils of half of the confederates. They found that both men and women chose a dilated confederate significantly more often than a nondilated confederate. When asked to explain their selections, participants reported that their chosen partners were good looking, pleasant, and friendly; none indicated that pupil size was the reason for their selection. Pupil dilation is difficult for untrained observers to consciously appreciate without the aid of instrumentation. However, humans appear to be able to pick up on it at a subconscious level, which is adaptive for mating because of its reliable association with attraction.

Multiple characteristics of the face demonstrate reliable associations with perceived attractiveness. Thus far, our discussion of attractiveness has focused primarily on visually oriented cues in faces and bodies. People ascertain attractiveness using their other senses, as well. In the next section, we address the role of olfaction in the assessment of attractiveness.

### **Olfactic Attractiveness**

Humans have one of the dullest senses of smell in the animal kingdom, so many may find it surprising that olfaction is related to attraction. However, experimental evidence suggests that signals of genetic fitness are transmitted in natural body odors and that they play a part in physical and romantic attraction. The major histocompatibility complex (MHC) is a set of genes

that play an important role in immune system functioning (Klein, 1986). It is most adaptive for people to be attracted to opposite-sex partners with dissimilar MHC, because this maximizes immune functioning and parasite resistance in offspring (see Wedekind, Seebeck, Bettens, & Paepke, 1995). In fact, people can detect differences in MHC through body odor, and these differences systematically affect judgments about attractiveness. To study the effects of MHC on attraction, Wedekind and Furi (1997) had a group of men each wear the same undershirts for a week without washing them. Afterward, male and female participants smelled each shirt and rated its odor for pleasantness. Both women and men rated the odors of men with dissimilar MHC genes as being more pleasant than the odors of men with similar MHC genes.

Additional evidence comes from Thornhill and Gangestad (1999), who replicated these procedures in order to ascertain whether olfactory pleasantness was related to perceived facial attractiveness and also to fluctuating asymmetry. Like Wedekind and Furi (1997), Thornhill and Gangestad had both women and men wear undershirts for several days after they had taken facial photographs of the participants and assessed them for their levels of body symmetry. During the study, the participants were not allowed to use colognes, scented soaps, or other products that would interfere with their natural body odors. Afterward, participants returned their undershirts to the researchers, and then male and female raters smelled each shirt and rated the pleasantness of the body odor. Thornhill and Gangestad reported that the body scents of men with greater symmetry (i.e., lower fluctuating asymmetry) were rated as more attractive by women; however, they found no evidence that men prefer the scent of symmetric women. They also reported that body scent attractiveness was related to facial attractiveness for both men and women, and that women's preference for the scents of facially attractive men was strongest when their fertility was highest across the menstrual cycle (see also Gangestad & Thornhill, 1998; Rikowski & Grammer, 1999).

These results suggest a clear link between the attractiveness of one's body odor, the facial attractiveness and body attractiveness (as measured by symmetry) of that person, and that person's potential quality as a mate (as measured by MHC heterozygosity). These findings are particularly important, given that olfactory cues are directly related to sexual arousal in both men and women (see Hirsch, 1998; Hirsch & Gruss, 1999).

In Western cultures, however, it is common for people to mask or eliminate their natural body odors (Hirsch, 1998). What effect does this have on perceived attractiveness? Two studies have addressed this question. In a field experiment on perfume use, Aune (1999) had female confederates approach undergraduate students and ask if they could be interviewed about

their library usage habits. The confederates indicated that they were taking part in an interviewing class, that the interview was a course assignment, and that they would be asking the students to evaluate them at the conclusion of the interview. The evaluations included assessments of the confederates' physical attractiveness. The confederates conducted the interviews wearing either a low amount of perfume (one spray in the neck/chest area), a moderate amount (two to three sprays), a high amount (five to six sprays), or no perfume (control condition). Aune found that female students rated the confederates as most physically attractive in the no-perfume condition, less attractive in the low-perfume condition, even less in the moderate-perfume condition, and least attractive in the high-perfume condition. Male students' evaluations showed a similar pattern, except that their ratings of attractiveness were highest in the low-perfume condition rather than in the no-perfume control group.

A similar study conducted by Baron (1981) suggested that, in face-to-face interactions, the olfactory channel interacts with the visual channel to influence people's perceptions of a perfume wearer. Baron had female confederates interact with male participants during a first impressions exercise. Unlike Aune, Baron manipulated perfume use only by having the confederates either wear or not wear perfume, but he crossed that manipulation with another: the formality of the confederates' dress. In the neat dress condition, confederates wore a blouse, a shirt, and hose; in the informal dress condition, they wore jeans and a sweatshirt. Participants were asked to provide evaluations of the confederates after the interaction.

Baron found that when the confederates were dressed informally, they were perceived as warmer, more romantic, and more physically attractive when they wore perfume than when they did not. When the confederates were dressed neatly, however, the pattern was reversed: they were judged as warmer, more romantic, and more physically attractive when they did not wear perfume than when they did. Perfume use did not exert main effects on participants' ratings, as it did in Aune's study. Baron suggested that the combination of dress and perfume use made the confederates vary along a continuum of formal to informal, with neat dress and perfume use as the most formal, and informal dress with no perfume as the least formal. He speculated that participants may have been exerting a preference for moderate formality (informal dress with perfume, or neat dress with no perfume; see also Baron, 1983).

Thus far in this chapter we have focused on what makes people attractive in terms of visual and olfactory cues. Another powerful aspect of attraction, however, is the sound of the voice. Several vocalic characteristics have been shown to be reliably associated with perceived attractiveness. We turn our attention to these in the following section.

## Vocal Attractiveness

Earlier in this chapter, we discussed the halo effect, or the idea that people attribute positive qualities to physically attractive others. Nonverbal communication researchers have discovered that this tendency extends to vocal attractiveness, as well, leading Zuckerman and Driver (1989) to coin the term *the vocal attractiveness stereotype*. A number of investigations have since demonstrated that people with attractive voices are, like people with attractive faces, evaluated more positively by others than are people with less attractive voices. Zuckerman and Driver (1989) presented two studies showing that speakers with attractive voices were judged by listeners as being higher in likeability, achievement, and dominance than were speakers with less attractive voices. Moreover, they reported that the effect of vocal attractiveness on personal evaluations was more pronounced when the evaluators had access only to the voice than when they could both see and hear the speaker. These effects were replicated in a later study by Zuckerman, Hodgins, and Miyake (1990), which showed that vocal attractiveness also affected listeners' perceptions of the speakers' personality types (see also Larrance & Zuckerman, 1981; Miyake & Zuckerman, 1993).

If vocal attractiveness affects interpersonal evaluations the way that physical attractiveness does, what makes a voice attractive? Zuckerman and Miyake (1993) addressed this question by having coders rate a number of voices on twelve subjective measures of vocal quality, which included pitch, shrillness, resonance, nasality, articulation, and throatiness. They also performed acoustic analyses on the same voices for fundamental frequency, amplitude, and duration. Finally, they regressed participants' evaluations of the attractiveness of the voices onto these coded vocal and acoustic qualities to ascertain which qualities, alone or in combination, best explained people's perceptions of what made the voices attractive.

Their analysis showed that an attractive voice was one that was high in articulation, low to moderate in shrillness, pitch, and pitch range, low in nasality, and high in resonance. When Zuckerman and Miyake analyzed which vocal characteristics best predicted positive evaluations of the speakers, they found that speakers whose voices were "less monotonous, more articulate, lower in pitch, higher in pitch range, either high or low in squeakiness, and intermediate in total pause" were evaluated the most positively by participants (p. 127).<sup>3</sup>

In the preceding section, we have reviewed research on multiple aspects of bodily, facial, olfactory, and vocalic attractiveness. Each influences the process of attracting one person to another, and the subsequent formation of personal relationships. A summary of these markers of attractiveness appears in Table 3.1. To end this chapter, we turn finally to the process of communicating one's attraction for another through the use of flirtation

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<sup>3</sup>The regression variables of squeakiness and total pause were curvilinear.

TABLE 3.1  
Markers of Human Attractiveness

<i>Body Attractiveness</i>
Body type
Physical symmetry
Proportionality of body features
Waist-to-hip ratio
Height
Body mutilations
<i>Facial Attractiveness</i>
Facial symmetry
Proportionality of facial features
Facial neoteny
Averageness
Facial hair
Pupil size
<i>Olfactic Attractiveness</i>
Attraction to dissimilar scents
<i>Vocal Attractiveness</i>
Pitch
Pitch variation
Clarity
Resonance
Amplitude

and courtship cues, which are largely nonverbal in nature. First, however, we look to see how David and Tina fare in their initial meeting.

David decided he couldn't wait any longer—he simply had to talk to her. Tina saw him walking over and, although she was just as eager as he was to visit, she decided to play it cool and see where the conversation went. David wisely decided against a cheesy pick-up line and, instead, just asked Tina if he could buy her a drink. She agreed, although she continued visiting with her friends while David stood next to their table. Finally, she invited David to join them, and after a couple of drinks, a lot of laughter, and some brief, flirtatious touches, David and Tina decided to head to another bar—alone—so that they could visit more intimately.

## FLIRTING AND COURTSHIP

Physical attractiveness serves little purpose in the long run if humans fail to act on their attraction. It is important, therefore, to understand the process

of conveying one's attraction and interest in another, which is largely accomplished through nonverbal behavior. When discussing the flirtation process, it is necessary to distinguish between actual courtship and *quasi-courtship*. Whereas the courtship process has eventual copulation as its intended outcome, quasi-courtship does not. Rather, people engaging in quasi-courtship behaviors are being flirtatious with no actual goal of achieving sexual contact. Schefflen (1965) first recognized such behaviors when he found that, during family therapy sessions, some women would flirt with the therapist, even while their husbands were in the room. He suggested that quasi-courtship behaviors are not intended to invite sexual contact, but rather to invite affirmations of people's own sexual appeal and attractiveness. However, there is often little distinction in the flirtation behaviors used by courters and quasi-courtiers; where the groups differ is often only in the eventual outcomes they seek.

Givens (1978) suggested that the human courtship process proceeds through five phases, the first of which is the *attention phase*. The goal at this stage is for people to gain each other's attention in such a manner as to convey interest—but not excessive interest. As Givens indicated, "The essence of the attention phase in courtship is *ambivalence*—tentative and hesitant approach. Potential courtiers may be expected to emit nonverbal cues which indicate conflicting psychosocial orientations" (p. 349). Behaviors such as sidelong glances, gaze-lowering, vacillation in gazing at and gazing away, and ambivalent smiles are often used to convey that one is interested but noncommittal (see also Eibl-Eibesfeldt, 1971, 1975). This is similar to the ways in which Tina initially communicated her ambivalence to David, by continuing to visit with her friends while he was attempting to engage her in conversation.

Evolutionary principles would suggest that this ambivalence may be more important for women than for men, given that women's greater investment in mating and childbearing generally makes them the more selective of the two sexes. Men, by contrast, should appear more eager for contact and, as a result, may be less attuned to signals of disinterest than women are. Indeed, Moore (2002) found that men rated invitational nonverbal behaviors, such as lip licks, forward leans, nods, and hair flips, more positively than did women. Conversely, men rated rejection behaviors, such as yawning, looking away, or looking at the ceiling, as sending a less potent message of disinterest than did women.

The second stage is the *recognition phase*, which occurs when parties have exchanged signals of mutual interest during the attention phase. In the recognition phase, partners acknowledge each other's interest and display signals of their availability. These include high-immediacy behaviors, such as direct body orientation, forward leaning, mutual gaze, eyebrow raises, and smiling. Coupled with these signals, however, are typically sig-

nals of submissiveness, such as head tilts or shoulder shrugs, which convey to courters that they can approach without fear of hostility. As Givens explained, “by disclaiming dominance with submissive gestures, the courter grants to receivers an implicit permission to approach” (p. 350). Kendon (1975) suggested that particular physical features in women also emphasize submissiveness on their own, such as relative hairlessness, smooth complexions, and youthful voice tones. These, in turn, may dispose men toward protective and caretaking behaviors.

In the third phase, the *interaction phase*, partners move from signals of interest to actual conversation. At this point, the goal is for courters to form a bond and, simultaneously, to exclude others from the conversation. David and Tina moved into this phase when they decided to leave their friends behind and go to another bar alone. Givens suggested that the topics of conversation at this stage are largely irrelevant. Instead, what matters is the pattern of the interaction itself: how easily couples converse, how animated and synchronized their behaviors are, and how comfortable and arousing their interaction is. Many of the same nonverbal behaviors that were prominent during the attention and recognition phases continue to be important at the interaction phase, particularly those behaviors that convey interest and submissiveness.

If the preceding stages have been successful, the couple will enter the *sexual arousal phase*, during which time they will signal their active sexual interest in each other. Behaviors such as touching, kissing, and showing affection are common at this stage (see, e.g., Moore, 1985, 1998; Moore & Butler, 1989; Perper, 1985). Interestingly, the affectionate behaviors that characterize this stage often mimic those observed between children and caregivers. Givens explained:

Barriers to physical closeness have begun to relax in this phase, and tentatively at first, touching, stroking, caressing, massaging, playing with the other's hands, all behaviors that may be observed in the earliest parental responses to the neonate, begin to be exchanged. Paralinguistically, speech continues in a soft and high-pitched manner; semantically, it may be well stocked with childcare metaphors (e.g., “baby,” “sugar daddy,” “little lady,” “babe”) and pet names (e.g., “cutie,” “dollie,” “sweetie”). Even varieties of baby talk may be used. The partners can be expected to give and receive certain activities related to breast-feeding. Nuzzling, licking, sucking, playful biting, kissing, and so on, which appear to have a broad geographical distribution as sexually meaningful signs, can be used to communicate the emotional intimacy that is prerequisite to sexual intercourse. (p. 352)

Finally, if all has gone well in the earlier stages, a couple might enter the *resolution phase*, which is characterized by copulation. It is at this stage that courtship differs from quasi-courtship and flirtation, which are not intended



TABLE 3.2  
Phases of Human Courtship

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*Attention Phase*

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Partners gain each other's attention in order to convey interest

---

*Recognition Phase*

---

Partners acknowledge each other's interest and display signals of their availability

---

*Interaction Phase*

---

Partners move from signals of interest to actual conversation, while simultaneously excluding others

---

*Sexual Arousal Phase*

---

Partners overtly signal their sexual interest in each other

---

*Resolution Phase*

---

Partners engage in sexual interaction

---

*Note.* Data from "The Nonverbal Basis of Attraction: Flirtation, Courtship, and Seduction," by D. B. Givens, 1978, *Psychiatry*, 41, 346–359.

to result in actual copulatory behavior. In fact, Egland, Spitzberg, and Zormeier (1996) reported that many types of flirtation behavior were equally common in romantic relationships (in which they would likely have copulation as a goal) and in platonic relationships (in which copulation would be less likely to be a goal). A summary of the five phases of human courtship appears in Table 3.2.

## SUMMARY

When they first saw each other, David and Tina found that they were immediately attracted to each other. Since their attraction preceded their first conversation, it is likely that nonverbal cues, such as physical appearance, played a highly influential role in attracting them to each other. Research has shown that people attribute a variety of positive characteristics to physically attractive others, especially in terms of perceptions of social competence and interpersonal ease. However, physically attractive individuals are only advantaged to a certain point. Beautiful people are perceived to be more vain and less modest than average-looking people. In addition, research on the matching hypothesis suggests that people are more likely to develop successful relationships with those who they perceive as similar to themselves in terms of level of physical attractiveness.

Multiple aspects of appearance and behavior are related to interpersonal attraction. Moreover, despite cultural beliefs to the contrary, research indicates that several dimensions of attractiveness are more objective than subjective. People from different cultures generally show agreement when evaluating the attractiveness of faces—and to a lesser extent—bodies. Body and face symmetry, body and face proportionality that approximates the phi ratio, male height, a .70 waist-to-hip ratio for women, youthful facial features (e.g., shorter nose, fuller lips, and large, widely separate eyes) combined with features suggesting sexual maturity (e.g., high cheekbones in women; strong chin in men), koinophilia, and pupil dilation appear to be universal aspects of physical attractiveness. Certainly, this does not mean that individual taste is irrelevant—to the contrary, we are often influenced by our peculiar preferences for various physical features such as hair color or body shape, and preferences for body type and body mutilations vary quite a bit based on culture. Rather, the cross-cultural and cross-historic consistency identified in many features of attractiveness attests to the importance of attraction in the survival and procreation of the species. Cues related to olfactics and vocalics also play a role in the attraction process. Although olfactive cues likely operate subtly and outside of conscious awareness, people are generally attracted to those who smell differently than themselves. Using too much perfume can negatively affect perceptions of attractiveness, whereas having an articulate, expressive, and resonant voice can positively affect perceptions of attractiveness.

Not all experiences of attraction lead to the development of relationships, of course; sometimes attractiveness is simply acknowledged and appreciated (such as when people look at models). For David and Tina, however, their attraction to each other was so strong that they were immediately motivated to meet, visit, and see if an emotional connection would ensue. Couples such as David and Tina may go through some or all of Givens' courtship phases—attention, recognition, interaction, sexual arousal, and resolution—with behaviors starting out submissive and then becoming increasingly immediate as they progress through the courtship process.

## Communicating Affection

*David decided to take Tina to a small, intimate jazz bar that he knew about. He wasn't sure what kind of music she liked or what kind of atmosphere she preferred, but he knew this bar would be quiet enough to allow them to get to know each other. Once they ordered drinks and sat down, the conversation immediately flowed. Tina talked about growing up the oldest of seven kids and how her parents, both doctors, actively encouraged her interest in math, an interest that eventually led her to major in finance and then earn an MBA. David talked about life in a small town and how growing up with a developmentally delayed brother sparked his interest in being an educator. Their conversation was easy and David and Tina were quickly growing fond of each other. By the time they met for a date the following evening, both were starting to experience feelings of affection for the other. Their mutual affection increased over the next week as they spent more time together, yet both of them kept their feelings to themselves. Tina worried that David might not reciprocate her feelings; David did not want to scare Tina off by displaying affection too early. After a couple more dates, however, their feelings were simply too strong to deny. David told Tina, "I really care for you." Tina smiled and said she felt the same way. A weight lifted from them both and the possibilities for their newly forming relationship seemed more exciting than ever before.*

The expression of affection is one of the most important communicative processes used in the development and maintenance of personal relationships. Affectionate behaviors in newly forming relationships often serve as critical incidents by which relational development is gauged (King & Christensen, 1983). For instance, relational partners frequently remember their

first hug, their first kiss, or the first time they said “I love you” to each other. By contrast, the lack of these behaviors in established relationships can be taken as evidence of relational deterioration (Owen, 1987).

We begin this chapter by discussing the types of nonverbal behaviors that humans use to convey affection in their personal relationships. In this discussion, we will distinguish between direct and indirect forms of affectionate expression. We will also detail the principal influences on affectionate behavior in personal relationships, including sex and gender, relationship type, contextual characteristics, culture, and individual differences. Finally, we address the benefits that affectionate communication has for relationships—and the risks to which it can expose them.

## HOW DO HUMANS CONVEY AFFECTION NONVERBALLY?

Although affection is frequently expressed verbally (see, e.g., Booth-Butterfield & Trotta, 1994), nonverbal forms of expression are often more provocative. As with other nonverbal behaviors, they may be enacted with less conscious control than verbal behaviors and might, therefore, be presumed to reflect more accurately the emotional status of the sender (Burgoon, 1994). They might also entail less risk for the sender than verbal expressions because their intended meanings may be easier to deny if, for instance, the sentiment is not reciprocated (for review of this and other risks associated with expressing affection, see Floyd, in press). In this section, we focus on the ways in which relational partners (both romantic and non-romantic) express their affection for each other nonverbally.

Why are nonverbal gestures such common vehicles for the communication of human affection? One perspective, espoused by Darwin in his 1872 book, *The Expression of the Emotions in Man and Animals*, advances the notion that nonverbal expressions of affection evolved from the nurturant behaviors used by parents to tend to their children:

No doubt, as affection is a pleasurable sensation, it generally causes a gentle smile and some brightening of the eyes. A strong desire to touch the beloved person is commonly felt; and love is expressed by this means more plainly than by any other. Hence we long to clasp in our arms those whom we tenderly love. We probably owe this desire to inherited habit, in association with the nursing and tending of our children. (p. 213)

Certainly, the repertoires of particular affectionate behaviors in individual relationships, families, or even entire cultures will vary as a function of learning and social construction. Nowhere is this more evident than in the

case of idiomatic affectionate behavior, which we discuss below. However, Darwin's suggestion that affectionate behavior is an extension of nurturant behavior is an important one because it explains why affectionate behavior is common across cultures and why so many of the most direct nonverbal forms of conveying affection are widely recognized throughout the world.

In an attempt to understand particular forms of affectionate behavior, much research has employed, at least implicitly, a dichotomous model in which affectionate behaviors are considered to be either verbal or nonverbal in nature. Although such a model is both intuitive and logically complete, it has failed to account for the fact that relational partners often convey affection for each other using behaviors that carry that connotative meaning for them but would fail to be recognized as such by observers (including researchers). To convey his affection for his father, for instance, an adult son might be more apt to help with a household project or provide other types of material support than to hug or kiss his dad. Toward the end of understanding these types of behaviors, in addition to the more overt forms of affectionate expression, Floyd and Morman (1998) proposed a tripartite model of affectionate communication behaviors that retained verbal affection as a category but distinguished between direct and indirect nonverbal affection behaviors. Behaviors in the latter two categories differ from each other primarily in their level of overtness. Nonverbal behaviors listed as direct affectionate expressions are those that convey affection overtly, in such a way that the sender, receiver, and observers would all tend to concur as to the meaning of the behaviors. In Floyd and Morman's self-report measure of affectionate behavior (the affectionate communication index, or ACI), hugging, kissing, and putting one's arms around another are all included in this first category.

Behaviors listed as indirect affectionate expressions, by contrast, are those that convey affectionate sentiments through the use of helpful, supportive behaviors—doing favors for someone or helping someone with a project, for instance. In their work on affection encoding, Floyd and Morman discovered that people often expressed their affection for each other through these types of supportive behaviors, rather than through the use of more overt affectionate gestures such as kissing or hugging. These behaviors are called indirect nonverbal affection behaviors because their meaning as expressions of affection is more covert than that of direct affection behaviors such as hugging or putting one's arm around another. In other words, observers of such behaviors would not necessarily interpret them as expressions of affection, and, as we note below, this covertness is a large part of what makes indirect affectionate behaviors so important. (Indeed, as we discuss later, indirect nonverbal affection behaviors are the most common means of expressing affection in some relationships, even more common than verbal statements are.)

In this section, we will discuss both direct and indirect nonverbal affection behaviors in detail. We will describe the types of actions that fall into each category and address how they are used in personal relationships. We will also review the limited research that has identified how various forms of nonverbal affection behaviors differ from each other in the intensity with which they convey affection.

### **Direct Affection Behaviors**

Direct nonverbal expressions of affection include those nonverbal behaviors that are readily associated with the communication of affection within the social community in which they are observed. (As we discuss later, these will sometimes vary from culture to culture and sometimes not.) These behaviors can take several forms. In this section, we will describe direct nonverbal expressions of affection using three categories: facial behaviors, postural/kinesic behaviors, and vocalic behaviors. It is important to note, however, that when people convey affection to each other nonverbally, they often use multiple behaviors simultaneously.

**Facial Behaviors.** The human face is remarkably expressive, particularly when compared to the faces of all other mammals. Human facial musculature allows for the formation of numerous unique expressions, many of which connote messages of affection, affiliation, and liking. The most evident forms of facial affection display include smiling, eye contact, displaying expressiveness or animation in the face, head nodding during conversation (to show attentiveness), and winking. A number of investigations have verified that these behaviors—particularly when used in combination—convey messages of affection, liking, and intimacy.

Burgoon and her colleagues have done extensive research on the relational message interpretations of various nonverbal cues, several of which are pertinent to the communication of affection. In an early experiment, Burgoon, Buller, Hale, and deTurck (1984) had participants watch videotaped segments of conversations in which various combinations of nonverbal behaviors had been manipulated. They examined the effects that these combinations of cues had on the participants' subsequent evaluations of the relational messages being displayed by the actors on the videotapes. In terms of facial behaviors, Burgoon et al. reported that high eye contact and frequent smiling were both interpreted as conveying intimacy and affection. A later study by Burgoon, Coker, and Coker (1986) further examined the effects of eye contact on relational message interpretations and found that people displaying high (nearly constant) eye contact were judged as conveying more affection than were those displaying normal, moderate eye

contact. Moreover, those displaying normal eye contact were seen as communicating more affection than were those displaying low eye contact.

Other studies have examined the ways in which people convey liking or affection for others when they are induced to do so but are not instructed in the behaviors to use. In an experiment by Palmer and Simmons (1995), for instance, participant confederates were induced to show either increased or decreased liking for a naive partner, using nonverbal behaviors only. The partners were then asked to indicate their levels of liking for the confederates. After coding for the participants' nonverbal behaviors, Palmer and Simmons investigated which of those behaviors were most strongly associated with changes in participants' reported levels of liking for the confederates. Their analyses revealed that participants' judgments of liking for confederates were associated with increases in three of the confederates' behaviors: eye contact, smiling, and the use of object-focused gestures (commonly called *illustrator gestures*.) In a similar study, Ray and Floyd (2000; see also Floyd & Ray, 2003) had participant confederates modify the extent to which they showed liking and affection for their naive partners using only nonverbal behaviors. They also coded the participants' nonverbal behaviors to see which were most strongly predictive of changes in participants' reports of how much the confederates liked them. In addition, third-party observers watched the interactions on closed-circuit television and provided their own reports of how much the confederates liked the participants; these reports were also analyzed for their associations with confederates' behaviors. For both participants and third-party observers, perceptions of confederates' affection were directly associated with confederates' facial animation, smiling, head nodding, and eye contact. Burgoon and Le Poire (1999) likewise found that eye contact and smiling were among the most powerful predictors of participants' perceptions of intimacy in a laboratory interaction.

***Postural and Kinesic Behaviors.*** Included in this second subcategory are those affection behaviors related to posture, haptics, proximity, and movement. One of the most provocative of these forms of affection display is touch. Thayer (1986) remarked,

Touch is a signal in the communication process that, above all other communication channels, most directly and immediately escalates the balance of intimacy . . . to let another touch us is to drop that final and most formidable barrier to intimacy. (p. 8)

Several forms of touch serve to convey affection, including hugging, kissing, caressing another's face, engaging in other adaptors such as grooming behaviors, holding hands, touching another's arm or leg, and even engaging

in sexual intercourse. A number of investigations have demonstrated that these types of touch behaviors are interpreted as expressions of affection, love, and intimacy, even when they are not reciprocated (see, e.g., Afifi & Johnson, 1999; Burgoon et al. 1984; Burgoon, Walther, & Baesler, 1992; Floyd, 1999; Rane & Draper, 1995). In a field experiment, Burgoon (1991) showed participants photographs of dyadic encounters depicting one of seven types of touch: shaking hands, holding hands, touching the forearm, putting an arm around the shoulder, putting an arm around the waist, touching the face, or a control condition with no touch. Participants were then asked to report their perceptions of how affectionate the actors in the photographs were being with each other. Burgoon reported that all of the touch conditions were rated as being more affectionate than the no-touch control condition. She also found that, for pictures depicting opposite-sex conversations, face touches and handholding were rated as conveying the most affection, whereas hand shaking was rated as being the least affectionate touch. For photos depicting same-sex interactions, face touches, handholding, and arms around shoulders were rated as the most affectionate, with the handshake again being rated as among the least affectionate forms of touch (see also Floyd, 1997). Similarly, Lee and Guerrero (2001) had people watch videotapes of supposed coworkers who engaged in the various types of touch studied by Burgoon (1991). Face touching was rated as most intimate and handshaking was rated as least intimate.

Third-party observers also tend to evaluate affectionate touch positively when they see it—and they extend those positive evaluations to the person doing the touching. In a study of adults' nurturant touching of young children, Rane and Draper (1995) found that both men and women depicted in written scenarios as touching young children in nurturant, affectionate ways were rated higher on goodness and social acceptance than were men and women depicted as not engaging in such touch.

As a means of conveying affection, touch is especially interesting because many touches can be enacted in a variety of ways, each of which might carry a somewhat different relational connotation. Let us consider the kiss as an example, which can range in intensity from a momentary peck on the cheek to a prolonged mouth-to-mouth encounter. Several aspects of a kiss might vary as a function of its intended meaning. Longer kisses may connote affection of a romantic nature, whereas shorter ones connote familial or platonic affection. A kiss on the mouth is often more intimate than a kiss on the cheek, and an open-mouth kiss more intimate than a closed-mouth kiss. A dry kiss (with no tongue contact) might be used when nonromantic affection is conveyed, whereas romantic or sexual affection might call for a wet kiss.

Another example is the embrace, which can also vary on a number of dimensions. One is their duration; longer hugs are often used to convey more



intense affection than shorter hugs. Another is their intensity, which is a function both of the pressure and the amount of body contact. Intimates may engage in intense, full-body-contact embraces, whereas casual friends might prefer lighter hugs that are restricted to upper-body contact. Finally, hugs vary in their form, which is primarily a function of relative arm placement. In his study of the embrace, Floyd (1999) referred to three forms of hugging: the *criss-cross hug*, in which each person has one arm above and one arm below the other's; the *neck-waist hug*, in which one person's arms wrap around the other's neck and the other person's arms wrap around the person's waist; and, the *engulfing hug*, in which one person's arms are held together on his or her chest and the other's arms are wrapped entirely around this person (this is sometimes referred to as a bear hug).

A different type of touch behavior, which Morris (1977) referred to as a *tie sign*, is not only an expression of affection between relational partners but also signals the partners' relational status to third parties. Relational partners enact tie signs by holding hands, linking their arms, putting their arms across each other's backs or around each other's waists when they walk, touching each other's faces in public, or by using other touches that convey affiliation, ownership, or exclusivity. Often, these types of behaviors characterize the beginning stages of a romantic relationship, such as courting and dating, more so than later stages when it may be less necessary for romantic partners to signal their attachment to outsiders.

In a series of studies examining the use of tie signs in romantic and nonromantic opposite-sex relationships, Afifi and Johnson (1999) discovered that tie signs are used more frequently in dating relationships than in platonic friendships and that the most commonly observed tie signs in both types of relationships are patting, shoulder embraces (putting one's arm around another's back shoulder), and handholding. Afifi and Johnson also found that tie signs were used for the purpose of conveying physical affection more often in romantic than in platonic relationships.

Other behaviors in this subcategory include the use of posture and proximity to convey affection, liking, and interest in others. In general, standing or sitting close to another person conveys more affection than does maintaining distance, and using a normal or relaxed posture is seen as more affectionate than using a stiff, formal posture.

In her field experiment using photographs of dyadic interaction, Burgoon (1991) also elicited affection ratings for photographs in which she had manipulated the actors' proximity and posture. The proximity manipulation had three conditions: far (participants stood seven feet apart); intermediate (four feet); and close (one foot). The posture condition likewise had three conditions: tense (in which actors' arms were folded, their shoulders were tense, their legs were stiff, and they stood symmetrically); intermediate (arms were relaxed at sides, leg and arm posture was symmetrical); and re-

laxed (shoulders were slumped, arms and legs were asymmetrical and away from trunk). Burgoon reported a three-way interaction effect for proximity, posture, and the sex combination depicted in the photos (same-sex or opposite-sex) on participants' affection ratings. Specifically, for opposite-sex pairs, participants gave the highest affection ratings to those with close proximity and relaxed posture. For same-sex pairs, participants' affection ratings were highest for actors depicting close proximity and intermediate/normal posture.

One conversational behavior that manipulates both posture and proximity is the forward lean. Leaning forward toward another during a conversation often signals immediacy and interest in the conversation and in the other person (Burgoon, 1991; Palmer, Cappella, Patterson, & Churchill, 1990; Trout & Rosenfeld, 1980). In their study on nonverbal means of conveying affection, Ray and Floyd (2000) found that participants' reports of how affectionate the confederates were being were directly related to the extent to which the confederates leaned forward toward participants during conversation.

**Vocalic Behaviors.** People can also convey affectionate messages by the way they use their voices when speaking with loved ones. In particular, three acoustic properties of the voice have received attention in research on affectionate communication. The first is fundamental frequency ( $F_0$ ) or pitch, which is a measure the number of vibrations per second being generated by the voice. The second is variance in  $F_0$ , or the extent to which the voice uses a range of pitches as opposed to being monotonic. The third property is amplitude or loudness, which is a measure of the acoustic energy being generated by the voice.

Several studies have investigated the extent to which these acoustic properties of the voice are associated with various relational messages. Low modal  $F_0$ , for instance, has been found to be associated with perceptions of dominance and aggression (Buller & Burgoon, 1986; Ohala, 1982), and with relaxation in men (Newton & Burgoon, 1990a). Monotonic voices—those with low pitch variation—are generally perceived as unpleasant, whereas greater pitch variation characterizes more pleasant-sounding voices (Buller & Burgoon, 1986). Several studies have also indicated that amplitude is directly associated with perceptions of dominance and negative affect (see, e.g., Harrigan, Gramata, Lucic, & Margolis, 1989; Kimble, Forte, & Yoshikawa, 1981; Tusing & Dillard, 2000). To ascertain which vocalic properties are associated with the communication of affection, Floyd and Ray (2003) analyzed the acoustic properties of the voices of the confederates from the Ray and Floyd (2000) experiment. Specifically, they ascertained which properties of the confederates' voices were associated with participants' and observers' reports of the confederates' affection levels.

The predictor variables were confederates' vocalic fundamental frequency ( $F_0$ ), variance in fundamental frequency, and amplitude. (Control variables were the sex of the confederate and the confederates' talk time, measured in seconds.) Working from affection exchange theory, Floyd and Ray hypothesized that  $F_0$  and variance in  $F_0$  would both show direct relationships with participants' and observers' reports of confederates' affection levels, whereas loudness would show an inverse relationship with these outcome measures.

Some interesting patterns emerged from the analyses. For  $F_0$ , observers' reports manifested the predicted linear relationship. Participants' reports were subject to a sex-by- $F_0$  interaction effect, however, which indicated that the predicted linear relationship held for female confederates only. For male confederates,  $F_0$  was inversely related to participants' reports of their affection level, which was contrary to the hypothesis. In other words, participants thought that the female confederates were being the most affectionate when their voices used higher pitches, but male confederates were seen as being the most affectionate when their voices used lower pitches. Third-party observers, by comparison, saw all of the confederates as being more affectionate the higher their voices were.

Both participants' and observers' reports of confederates' affection levels were linearly related to confederates' variance in  $F_0$ , as hypothesized. Contrary to Floyd and Ray's prediction, however, neither participants' nor observers' reports were significantly related to confederates' vocal amplitude (although both relationships were inverse, as expected).

One specific pattern of vocal behavior that often connotes affection is babytalk. Babytalk is a vocalic pattern characterized by high modal pitch and high pitch variance, and exaggerated, highly simplified, and often repetitive speech, which people frequently employ when speaking to babies, the elderly, pets, and romantic partners (Zebrowitz, Brownlow, & Olson, 1992). Babytalk has been documented in multiple cultures in North America, Asia, Europe, and Africa, and is practiced by both men and women, whether or not they are parents (see, e.g., Fernald & Simon, 1984; Shute & Wheldall, 1989; Toda, Fogel, & Kawai, 1990). Floyd (in press) speculated that babytalk evolved as a means of conveying romantic affection because it mimics the nurturant tones people use when caregiving (whether with an infant, a pet, or with the elderly) and, therefore, signals to one's romantic partner a capacity for care.

Although we refer to these facial, postural/kinesic, and vocalic affection behaviors as direct, their meaning can be more ambiguous than that of verbal statements. This is true, as we noted above, because many direct nonverbal gestures of affection can be performed in a variety of ways, each of which might carry a somewhat different meaning. Indeed, these and other direct nonverbal gestures are interesting, in part, because their meaning is

often more ambiguous than that of verbal statements. The verbal content of a message such as “I love you” is always the same; it always consists of these three words in this exact order. This does not mean that its meaning is always unambiguous; rather, it means that variation in its meaning cannot be attributed to variation in its verbal form, because there is no such variation. The same is not true of many of the direct nonverbal gestures of affection.

### **Indirect Affection Behaviors**

This category includes nonverbal behaviors that convey affection indirectly, through acts of social support or through the use of idioms, rather than through the direct encoding of affectionate feelings. As such, they often appear outwardly to be the least intense of the three forms of affectionate communication. In fact, they are often the most potent of the three. Moreover, in some relationships, they are the most common of the three forms to be observed (see, e.g., Morman & Floyd, 1999). In this section, we will examine social support behaviors and idiomatic expressions separately as nonverbal means of conveying affection indirectly.

**Social Support Behaviors.** Many behaviors in this category are characterized by their provision of some type of assistance. Some cases involve the provision of psychological or emotional support. For instance, relatives and friends might show their affection to a newly divorced young mother by providing a sympathetic ear, making themselves available to her at all hours, and leaving her gifts to underscore their caring and affection for her. This type of support is closest to what most researchers consider social support; however, this category of affection behaviors also includes cases that involve the provision of more instrumental types of support. For example, the relatives and friends of the young mother might also show their affection by offering to babysit, bringing her meals, taking care of her yardwork, and sending her money to help with her financial needs.

None of the support behaviors mentioned here encodes an affectionate message directly, the way that behaviors like kissing or saying “I love you” do. Indeed, one can easily conceive of situations in which many of these behaviors would have no affectionate connotations whatsoever—a therapist lending a sympathetic ear, for instance, or a social service agency sending money. However, when these behaviors are done for the purpose of conveying affection, they often do so in a more profound way than verbal statements or direct nonverbal gestures do. Consistent with the idea that actions speak louder than words, relational partners seem to feel that when they are in need of support, their true friends are those who don’t just say they care, but who also show their care through their actions. Sometimes,

hearing the words “I love you” is the most profound expression of affection one can experience; other times, it appears, talk can be cheap and one looks to people’s behaviors as a more valid barometer of their true level of affection (see Floyd, in press). The provision of a resource, whether it be one’s money, one’s time and effort, a material resource (such as the use of a car), or merely one’s attention, is significant both denotatively and connotatively to the recipient. Such provisions denote that “I wish to meet the need you are experiencing” and connote that “You are so important to me that I am willing to use my own resources to meet your need.”

Social support behaviors are distinguished from verbal and direct nonverbal forms of affectionate communication not only by their provision of support but also by the relative indirectness with which they encode affectionate messages. This may be the more important of their two characteristics, for at least two reasons. First, it makes them more likely to be overlooked by recipients as affectionate gestures. An example, sometimes used in therapeutic education, tells of a husband who was advised by a marital therapist to show more affection to his wife. In response, the husband went directly home and washed his wife’s car. Later, he was astonished that neither his wife nor their therapist had recognized this instrumental behavior as an expression of affection, because to the husband, it clearly was. If the husband had instead rushed home and said “I love you” to his wife, no such problem would have ensued.

In the same vein, the relative indirectness with which support behaviors encode affectionate messages makes them more likely than verbal or direct nonverbal gestures to be overlooked by third-party observers. This is, potentially, one of their greatest assets, because it allows for people to express affection covertly if they choose, in ways that may not be evident to onlookers. Swain (1989) suggested, for instance, that it is more common for men to express their affection for their male friends through instrumental support behaviors, such as helping with a household project, than through the use of more overt affectionate behaviors. Swain proposed that men do this so that their affectionate sentiment can be conveyed in such a way that protects them from possible ridicule or negative attributions from others, who might see more overt expressions of affection as being feminine (see also Parks & Floyd, 1996; Wood & Inman, 1993).

**Idiomatic Expressions.** A second type of indirect nonverbal affection involves individuals’ ways of expressing affection that are idiosyncratic to their particular relationships. Relational partners might devise idioms for the communication of affection for a number of reasons. For instance, idiomatic expressions may allow people to convey their affection for each other secretly. In the 1997 film, *Bent*, two prisoners in a Nazi POW camp discover feelings of affection for each other but are too afraid of repercussions from the guards

to express their feelings overtly. As a result, they developed an idiom whereby one would scratch his eyebrow in view of the other and both would recognize it as an expression of affection. These types of idioms allow relational partners to convey their affection openly in public contexts without concern for how others in the same context might respond.

Idioms of this nature may also allow people to express affection in situations when social conventions might prohibit overt affectionate displays (for instance, during a business meeting or a church service). Moreover, as Oring (1984) suggested, relational partners can use these types of idioms to underscore the intimacy of their relationships, because their use indicates that the users “know one another in ways unknown and unknowable to others” (p. 21).

Although idioms defy generalization by definition, social scientists can still study the patterns in their use and the purposes they serve. Bell, Buerkel-Rothfuss, and Gore (1987) examined idiom use in heterosexual romantic couples and reported that expressing affection was among the most common functions of personal idioms. They found that idioms for affection were slightly more likely to be verbal than nonverbal and were more likely to be used in public context than in private. They also discovered that it was usually the man in the relationship who invented idioms for affection. Moreover, for both men and women, the number of idioms for expressing affection was linearly related to reported levels of love, closeness, and commitment in the relationship (see also Hopper, Knapp, & Scott, 1981).

One of the most intriguing aspects of the nonverbal communication of affection is the extent to which nonverbal affection displays can be covert. As we noted above, there may be many reasons why relational partners may choose to convey their affection in ways that, while meaningful for them, may not be regarded as affection displays by third-party observers. Indeed, research by Floyd and Morman (2000, 2001; Morman & Floyd, 1999) has indicated that, in some relationships, indirect nonverbal behaviors are more common than verbal or direct nonverbal behaviors as means of conveying affection.

A summary of direct and indirect nonverbal affection behaviors appears in Table 4.1. In the next section, we detail some of the individual and relational characteristics that influence how much affection people communicate.

## **PREDICTING THE USE OF NONVERBAL AFFECTION BEHAVIORS**

Several variables have been studied as predictors of nonverbal affectionate behavior. In this section, we discuss many of the most potent predictors, including sex and gender, culture and ethnicity, characteristics of individual

TABLE 4.1  
Forms of Nonverbal Affectionate Communication

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*Direct Nonverbal Behaviors*

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Facial behaviors: kissing, eye contact, winking, smiling

Postural and kinesic behaviors: hugging, hand-holding and other tie signs, sexual interaction, proximity

Vocalic behaviors: vocal warmth, vocal matching

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*Indirect Nonverbal Behaviors*

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Social support behaviors: Listening, doing favors, acknowledging special events, sharing secrets

Idiomatic behaviors: sharing behaviors that have relationship-specific affectionate meanings

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*Note.* Data from “The Measurement of Affectionate Communication,” by K. Floyd and M. T. Morman, 1998, *Communication Quarterly*, 46, 144–162.

personality, relationship type, and aspects of the social and relational context. It is important to note, however, that this list of predictors is not exhaustive; indeed, any number of variables may well influence the extent to which people convey affection nonverbally. Moreover, these predictors rarely operate in isolation; rather, they often interact in complex ways that nonverbal communication researchers have only begun to understand.

### **Sex, Sex Composition, and Gender<sup>4</sup>**

Numerous studies have examined the influences of sex, sex composition, and gender on the amount of affection people communicate to others, and the findings have been remarkably consistent. For example, nearly every study examining the effect of sex has found that women express more affection than men do, and those that have not (e.g., Bombar & Littig, 1996; Floyd, 1997) have reported null findings. This is true of both verbal and nonverbal forms of conveying affection. To our knowledge, no published research has found that men, at any age or in any context, express more affection than women do.

Not only do women express more affection overall than men do, but they are cognizant of this sex difference as well. Wallace (1981), in his study of affection in the family of origin, reported that women perceived themselves as having been more affectionate in their families of origin than men did,

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<sup>4</sup>We use the term *sex* to distinguish between biological males and biological females, and the term *gender* to refer to the socially and culturally prescribed role orientations of masculinity and femininity. By *sex composition*, we refer to the pairing or grouping of individuals within relationships by sex (e.g., male–male, female–female, male–female).



and that women perceived that they were still more affectionate than men were. In his diary study of affectionate behavior, Floyd (1997) also found that women perceived themselves as being more affectionate than men did. Interestingly, this was one of the few studies that did not show a sex difference in actual behavior; the significant difference was only in perceived behavior.

Instead of (or in addition to) main effects for sex, some studies have reported that affectionate behavior within dyads is influenced by their sex composition. In her study, Noller (1978) videotaped interactions between 87 Australian parents and their 3- to 5-year-old children as the parents were dropping the children off at a child-care center. She later coded the videotapes for the number of "instances of interactive behavior that would normally be regarded as affectionate (e.g., kissing, cuddling, hugging)" and compared these frequency scores according to the sex of the parent and the sex of the child (p. 317). Her results indicated that father-daughter pairs were significantly more affectionate than father-son pairs, whereas there was no such difference in pairs involving mothers. Mother-child pairs were more affectionate, overall, than father-child pairs, however.

Similarly, Floyd and Voloudakis (1999) reported that, in conversations between same-sex friends, women displayed greater nonverbal immediacy, expressiveness, and positive affect (as coded from videotapes) than did men; however, no sex differences in these behaviors were observed in conversations between opposite-sex friends. The same pattern emerged in Bombar and Littig's (1996) questionnaire study about affectionate babytalk; men and women did not differ from each other in their likelihood of using babytalk with opposite-sex friends, but women were more likely than men to use it with same-sex friends. The results of both studies indicated men are less affectionate nonverbally than women are in same-sex interaction but not in opposite-sex interaction. The pattern in Noller's study was only slightly different: boys were less affectionate than girls when interacting with fathers but not with mothers. Father-son dyads (which are male-male pairs) were the least affectionate of the four types, however. This is consistent with the findings of Floyd and Voloudakis, and Bombar and Littig.

Finally, some studies have examined the extent to which gender influences the amount of affection one communicates. Gender refers to one's psychological sex role orientation (i.e., masculine, feminine) rather than to one's biological sex, and it has been conceptually and operationally defined in various ways. Early approaches to measuring gender dichotomized masculinity and femininity, meaning that the more of one orientation a person was seen to have, the less he or she had of the other orientation. Being more masculine thus meant being less feminine, and vice versa (see, e.g., Gough, 1957). Bem (1974) reconceptualized masculinity and femininity as independent constructs, therefore allowing that an individual could actually



score high on both (a case she referred to as being *androgynous*), or could score low on both (which she referred to as being *undifferentiated*). In the Bem Sex Role Inventory (BSRI), *masculinity* is operationally defined as including assertiveness, competitiveness, and aggressiveness, whereas *femininity* is operationalized as including compassion, responsiveness, and gentleness. Although they eschew the terms masculinity and femininity, later operational definitions of the constructs, such as Richmond and McCroskey's (1990) Assertiveness–Responsiveness Scale (ARS), retain largely similar operational indicators of each.

The potential effects of gender on interpersonal behavior are particularly interesting to those who take a strong social learning theory perspective. Such a perspective suggests that men and women are not inherently different from each other in ways that ought to affect their behavior, with the obvious exception of reproductive behaviors. Any sex differences in behavior that are observed are therefore attributed to differences in role socialization—in the ways that culture and upbringing socialize girls and boys to act. According to this perspective, males act in predominantly masculine ways, and females in predominantly feminine ways, because (and only because) their social and cultural influences have taught them to. This conceptualization makes sex differences more pliable than if they are grounded in biological differences. Presumably, therefore, females who are more masculine than feminine ought to act more like males than like other females, and vice versa.

Morman and Floyd examined the influences of gender on affectionate behavior in a 1999 study of fathers and their young adult sons. Given the evidence that women tend to be more affectionate than men, and that they perceive themselves as more affectionate than men, Morman and Floyd predicted that direct nonverbal affectionate behavior would be directly related to psychological femininity and inversely related to psychological masculinity. In an earlier study, in fact, Rane and Draper (1995) reported that both men and women described in written scenarios were judged to be less masculine when engaging in nurturant touch with young children than when not engaging in such touch, by participants who read the scenarios. Because indirect nonverbal affectionate behavior is often covert—often unrecognized as a means of conveying affectionate messages—Morman and Floyd were unsure whether it would follow the same patterns with respect to gender, and so they advanced an open-ended research question on this point.

Using the BSRI to define gender operationally, Morman and Floyd discovered that sons' femininity was directly associated with their own direct and indirect nonverbal affection and with their fathers' direct and indirect nonverbal affection. Fathers' femininity was directly related only to their own indirect nonverbal affection. These results fit Morman and Floyd's hypothe-

ses. To their surprise, however, they also discovered that son's masculinity was directly (rather than inversely) associated with their own direct nonverbal affection and with their fathers' direct and indirect nonverbal affection. Moreover, fathers' masculinity was directly associated with their own direct and indirect nonverbal affection.

These results were surprising, given the lack of expectation that stereotypically masculine qualities (e.g., aggression, competitiveness) would be positively related to affectionate behavior, especially direct nonverbal affection and especially in male-male relationships, such as a father-son pair. Thinking that the results might be an artifact of a potentially outdated measure of gender roles, Morman and Floyd switched to Richmond and McCroskey's (1990) ARS and examined the relationships again in a different study of men's affection with their adult sons (Floyd & Morman, 2000). They elicited only fathers' reports in this study, but they again discovered that fathers' direct and indirect nonverbal affection were both directly related to fathers' femininity and directly related to their masculinity.

This replication suggested that the findings were not artifacts of the measurement. With no ready explanation for them, however, Morman and Floyd then wondered whether they might be unique to male-male relationships (or perhaps to father-son relationships in particular), so Floyd ran two new replications. As part of a 2003 project, he had adults complete the ARS and then report on their direct and indirect nonverbal affection with three targets: their mothers, their fathers, and a sibling (who was randomly selected if participants had more than one).<sup>5</sup> Floyd discovered that participants' femininity was directly related to their direct and indirect nonverbal affection for all three targets. Participants' masculinity was directly related to their indirect nonverbal affection with their siblings. The coefficients for all of these correlations are reported in Floyd and Mikkelson (2002).

The second replication was conducted during the Floyd and Tusing (2002) experiment, which involved opposite-sex pairs of adult platonic friends or romantic partners reporting on their relationships with each other. Again using the ARS as the operational definition of gender, Floyd and Tusing found that participants' direct and indirect nonverbal affection were directly related to their femininity and also directly related to their masculinity (coefficients appear in Floyd & Mikkelson, 2002).

Considered in concert, the findings from these four studies warrant several observations. First, affectionate behavior is positively associated with femininity, which is of little surprise given the tendency of women to be more affectionate than men. Second, affectionate behavior is positively associated with masculinity, which is more puzzling. Third, the associations

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<sup>5</sup>These data were collected as part of the project reported in Floyd (2003), although these analyses are not reported in that paper, but rather in Floyd and Mikkelson (2002).

between affectionate behavior and masculinity are neither measurement-specific nor relationship-specific. Fourth, masculinity showed fewer significant associations with affectionate behavior than did femininity, and the magnitudes of its correlations were generally smaller than those for femininity. Fifth, however, all of the significant correlations between affection and masculinity identified in these studies (and all of the nonsignificant ones, for that matter) were positive; not once did masculinity show an inverse association with any form of affectionate behavior in any relationship, as was originally hypothesized.

### **Individual Differences Other Than Sex or Gender**

Other aspects of individuals, besides their biological sex or gender role orientation, also appear to influence their level of affectionate behavior toward others. Floyd (2003) examined a number of individual- and relational-level characteristics to determine which would discriminate between people who, as a trait, are highly affectionate, and those who, as a trait, are nonaffectionate. He created known-divergent groups by having research assistants give questionnaires to the most and least affectionate people they knew. The questionnaires included measures of a number of individual-level characteristics, including self-esteem, comfort with closeness and intimacy, importance of relationships, attachment styles, stress, depression, and overall mental health. The two groups did not differ from each other in terms of their age, level of education, level of income, ethnicity, or area of the United States in which they lived. They did, however, differ on a number of other characteristics. Compared to low affection communicators, high affectionate communicators were more self assured, more comfortable with closeness and intimacy, in better mental health, less stressed and depressed, more likely to have a secure attachment style, and less likely to have a fearful-avoidant attachment style. A later project by Floyd, Hess, Miczo, Halone, Mikkelson, and Tusing (in press) confirmed that these benefits of expressing affection are independent of the benefits of receiving affection.

Floyd (2003) reported no relationship between participants' trait levels of affectionate behavior and their ages. However, other studies have reported associations between age and affectionate communication. In their study of communication motives, for instance, Rubin, Perse, and Barbato (1988) found that older respondents were more likely than younger respondents to report communicating for the purpose of conveying affection. Other studies have drawn more direct associations between age and actual affectionate behavior. In two studies with children and adolescents, Eberly and Montemayor (1998, 1999) discovered that 6th-grade students were more affectionate than 8th- and 10th-grade students (the latter of whom did

not differ significantly from each other), but also that 6th- and 8th-grade students were less affectionate toward their parents than 10th-grade students.

Research on father-son relationships has also found associations between age and affectionate communication. In a study of men's relationships with their preadolescent sons (ages 7 to 12 years), Salt (1991) reported that the son's age was inversely related to the father's self-reported affectionate touch behavior and also to the number of affectionate touches actually observed in the study. The same pattern emerged in Floyd and Morman's (2000) study of men's relationships with their adolescent and adult sons (ages 12 to 53 years). The son's age was inversely related to fathers' self-reported affectionate behavior. These studies both suggest that fathers are more affectionate with younger sons than with older sons. Floyd and Morman (2000) also reported a significant direct relationship between fathers' affectionate communication and fathers' own age. Thus, older fathers communicated more affection to their sons than did younger fathers.

Comparatively fewer studies have examined the effects of ethnicity on affectionate behavior, and among those that have, most have focused on touch. In one such study (Regan, Jerry, Narvaez, & Johnson, 1999), Asian and Latino heterosexual romantic dyads were unobtrusively observed while walking across the campus of California State University at Los Angeles. Coders observed each dyad for a period of two minutes and recorded any instances of touching behavior. Only half of the couples engaged in any form of touch during the two-minute observation window. Those who did, however, were significantly more likely to be Latino than Asian. With respect to particular forms of touch, the researchers found that Latino couples were more likely than Asian couples to engage in one-arm embracing (i.e., one person's arm draped across the shoulders of the other as the pair walks), although there was no significant difference in hand-holding. Regan and her colleagues explained their findings as being reflective of the difference between the contact culture of Latin America (which emphasizes personal proximity and touch) and the non-contact culture of Asia (at least, some parts of Asia; see McDaniel & Andersen, 1998).

Research comparing the touch behaviors of Black and White participants has produced mixed results. In a review of studies examining Black and White touch, Halberstadt (1985) reported that, in eight studies (Hall, 1974; Rinck, Willis, & Dean, 1980; Smith, Willis, & Gier, 1980; Williams & Willis, 1978; Willis & Hoffman, 1975; Willis & Reeves, 1976; Willis, Reeves, & Buchanan, 1976; Willis, Rinck, & Dean, 1978), Black participants exhibited more touch than did White participants, and that this difference was stable for all age groups from early childhood through adulthood. Halberstadt suggested that this behavioral difference reflects a difference in the social meaning of touch. Specifically, she contended that Black participants touched each other to convey messages of community and to de-

velop and maintain a sense of pride and solidarity, more than did White participants.

Contrary to these findings, a ninth study reviewed by Halberstadt (Reid, Tate, & Berman, 1989) reported that White preschool children touched White babies more than Black preschool children did with Black babies. By way of explanation, Reid and colleagues suggested that expectations for the appropriateness of touch, at least with infants, might be more stringent in Black families than in White families, causing Black children to shy away from touching infants more than White children of comparable ages did. To investigate this possibility, Harrison-Speake and Willis (1995) studied differences between Black and White adult respondents in their ratings of the appropriateness of several kinds of parent-child touch within families. These researchers approached shoppers in a Kansas City, Missouri market and asked them to read 18 short scenes depicting various forms of parent-child touch, ranging from a child sitting on a parent's lap to a parent touching the child's genitals while tucking him or her into bed. The children in the scenarios were described as being either two, six, ten, or fourteen years of age. Respondents (41% of whom were Black and 59% of whom were White) rated the appropriateness of each scenario.

Harrison-Speake and Willis found a main effect of ethnicity, whereby White respondents reported higher appropriateness ratings than did Black respondents. This main effect was qualified by numerous interactions effects involving the sex of the parent in the scenarios, the age of the child in the scenarios, and the type of touch being described.<sup>6</sup> Among the findings Harrison-Speake and Willis reported were that touch initiated by fathers was particularly viewed as less appropriate by Black respondents than by White respondents. However, the differences between Black and White participants also varied with the age of the child being described. For two-year-old children, Black respondents approved of parental touch more than did White respondents; this difference was reversed for six-year-old and ten-year-old children, whereas for fourteen-year-old children, no difference between Black and White respondents was observed.

## Relationship Type

Although affectionate communication is influenced by aspects of individuals, it is also influenced by aspects of the relationships in which they communicate. Several studies have compared different types of relationships to each other, in terms of their tendencies to communicate affection in particular ways.

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<sup>6</sup>Genital touches were excluded from these analyses for a lack of variance: nearly every respondent rated them as highly inappropriate, regardless of the sex of the parent or the age of the child.

Bombar and Littig (1996) examined the effects of relationship type in their study of babytalk. They found that, as predicted, people were more likely to use babytalk as a form of affectionate communication in their romantic relationships than in their platonic friendships. However, slightly more than half of their respondents (50.4%) reported having used babytalk in a platonic friendship, which suggests that the behavior is by no means exclusive to romantic relationships. Bombar and Littig also found that women were more likely than men to use babytalk with same-sex friends, but among opposite-sex friends no such difference was observed.

Two studies have shown that relationship types within families differ in terms of their levels of affectionate communication. Floyd and Morr (2003) examined nonverbal affection exchange in the marital/sibling/sibling-in-law system. They collected data from triads consisting of a married couple and the biological sibling of one of the spouses. All three participants in each triad reported on the extent to which they communicated affection to the other two, using Floyd and Morman's (1998) affectionate communication index. The reports for direct and indirect nonverbal affection were aggregated within each relationship, to form an affection score for that relationship (e.g., the two siblings' scores were averaged to form a score for the sibling relationship). Floyd and Morr then analyzed these scores by relationship type and discovered a clear pattern in which people communicated the most affection within their marriages, less affection within their sibling relationships, and the least affection within their sibling-in-law relationships. All of the relationship-type differences were statistically significant for both direct and indirect nonverbal forms of affectionate communication.

Similarly, data collected for the Floyd (2003) study indicated that both male and female participants were more affectionate in their relationships with their mothers than in their relationships with their fathers. Moreover, participants were most likely to communicate affection through indirect nonverbal behaviors, less likely to communicate affection through verbal behaviors, and least likely to communicate affection through nonverbal behaviors.

Two studies have also examined differences between biological and nonbiological family relationships in terms of their levels of affectionate communication. On the basis of affection exchange theory, Floyd and Morman (2001) reasoned that, if affection is a resource that contributes to long-term viability and fertility, then parents ought to give more affection to their biological children, on average, than to their nonbiological children (e.g., step-children or adoptees) because such discrimination will further the parents' own reproductive success. They tested the prediction in a survey of nearly 500 American fathers who reported on their affectionate communication with either a biological or a nonbiological son. The subsamples of step-sons and adopted sons were too small to analyze separately, so they

were combined for purposes of the comparison. Floyd and Morman found that fathers reported expressing more direct and indirect nonverbal affection to biological sons than to nonbiological sons. There is some disagreement in the literature on parental behavior as to whether predictions made for step-children should necessarily generalize to adopted children (see, e.g., Daly & Wilson, 1995). To examine these relationships separately, Floyd and Morman replicated their study in two new surveys, which are reported in Floyd and Morman (2002). The first survey included only fathers' self-reports, whereas the second survey included the reports of both fathers and sons about the fathers' affectionate behavior. Both surveys had a more equal distribution of biological, step, and adoptive father-son relationships than was the case in the earlier study, which allowed examination of the three relationships separately. Both surveys indicated that fathers were more affectionate with biological and adoptive sons than with step-sons, but that biological and adoptive relationships did not differ significantly from each other.

### **Contextual Characteristics**

Finally, aspects of the context or situation in which communicators find themselves can influence affectionate communication. Research on contextual influences has focused primarily on privacy and has produced some mixed findings, depending on the behaviors being examined and on whether reports of behaviors or judgments of their appropriateness have been sought. Bell and Healey (1992), for example, reported that participants in their study were more likely to express affection through the use of idioms in private settings (such as at home) than in public settings (such as at work). Respondents in Bombar and Littig's (1996) study similarly reported that they were more likely to communicate affection to friends or romantic partners through the use of babytalk in private contexts than in public ones.

Conversely, however, when Floyd and Morman (1997) asked respondents to report on their perceptions of the appropriateness of affectionate behavior with friends or siblings, they discovered that affectionate behaviors were judged to be more appropriate in public settings than in private ones, a finding that was replicated for male respondents in Morman and Floyd (1998).

Why should the privacy level of the context matter, either in terms of people's actual affectionate behavior or in terms of their perceptions of appropriateness? The answer may have to do with the risks involved in overtly communicating affection, particularly in nonromantic relationships (such as friendships or family relationships). Certain risks, such as embarrassment, are mitigated by saving affection displays for private settings. Other risks, however, are mitigated by expressing affection publicly. For in-



stance, if a woman wonders whether her friend's affection display might be a romantic overture, she may be less concerned if the display occurs in a public setting, where she knows that her friend realizes he or she is being seen and heard by others. That is, if her friend appears unconcerned about how onlookers might interpret the affection display, then she may be similarly unconcerned, whereas if the display occurred in private, she might be led to wonder why her friend waited for a private setting before conveying his or her affection.

Another important aspect of some social contexts is their level of emotional intensity. Floyd and Morman (1997) predicted that affectionate behavior in nonromantic relationships would be considered less appropriate in emotionally neutral situations than in situations that are emotionally charged in some way. Their reasoning was that the emotional intensity of a situation like a wedding, a graduation, or a funeral would make affection displays more common—and thus, would mitigate any potential risks of such displays—than in situations that were not particularly charged emotionally. To test the prediction, they used a scenario method involving descriptions of a positively charged situation (in this case, a wedding), a negatively charged situation (a funeral), and a neutral situation (an interaction in a classroom). As hypothesized, they found that respondents rated affectionate behavior as more appropriate in the emotionally charged situations than in the emotionally neutral one. There was no difference between the positively charged and the negatively charged situations. They replicated this finding with male respondents in Morman and Floyd (1998).

## SUMMARY

Affectionate communication is vital to the formation and maintenance of interpersonal relationships, whether romantic, familial, or platonic. A lack of affection, by contrast, can signal relational deterioration. Affectionate behaviors are an extension of the nurturant behaviors people are first exposed to as children. Thus, affectionate behaviors communicate liking, intimacy, and caring. In this chapter, we discussed both direct and indirect means of conveying affection through nonverbal behavior. Although all nonverbal cues that communicate affection are somewhat ambiguous (especially compared to verbal cues), some of these behaviors—including smiling, hugging, kissing, nodding, and winking—have strong, direct social meanings related to affection and intimacy. Touch sends especially strong messages of intimacy. Studies suggest, however, that not all touch is equal. The criss-cross hug and tie signs are rated as particularly intimate. Among non-sexual forms of touch that involve using the hands (rather than kissing, for instance), a soft touch to the face is evaluated as the most affectionate.



Other direct affection behaviors include speaking in an expressive and warm voice, using babytalk, and showing facial and kinesic animation. Indirect affection behaviors include social support and idiomatic expressions. These behaviors are less overt because people do not necessarily interpret them as expressions of affection. Nonetheless, they are very potent predictors of relational closeness.

Among the various demographic variables that predict affectionate behavior, biological sex has produced the most consistent results. Regardless of the methodology employed, women are rated as showing more affectionate behavior than men. However, this sex difference is most pronounced when comparing woman-to-woman interactions (e.g., female friends; mothers and daughters) with man-to-man interactions (e.g., male friends; fathers and sons). In cross-sex interaction, sex differences diminish or disappear, perhaps because males feel freer to show affection with females than with other males. For instance, fathers show more affection to their daughters than their sons. Psychological gender also appears to be associated with affectionate behavior. Both femininity and masculinity are associated with the expression of affection across a variety of relationships, although masculinity shows fewer significant associations with affectionate behavior than femininity. Other variables, including age, ethnicity, relationship type, and personality also appear to influence the amount and type of affection people display. Given the centrality of romantic relationships, families, and friendships in the human social experience, it is no overstatement to say that affectionate communication is important to everyone.

## Nonverbal Expressions of Emotion

*During their first few dates, both Tina and David were careful to manage their emotional expressions. David thought he was falling in love with Tina, but he didn't want her to know the intensity of his emotions lest she would be scared off. Tina also hid the intensity of her feelings, even though the new relationship she shared with David made her happier than she had been in a long while. During this early stage of the relationship, both Tina and David managed impressions by showing more positive emotion than negative emotion when interacting with one another. However, as their relationship developed, they began to feel more comfortable expressing negative emotion. At one point, Tina wanted to discuss an issue that was bothering her: David seemed not to like one of her friends very much. Although Tina tried to stay calm during the discussion, David interpreted her neutral tones as negative and became defensive. Rather than talking about the problem constructively, they both become flooded with emotion and ended up getting into their first big fight. Both walked away from the interaction angrily, and both wondered why things had seemed so much simpler when they had first started dating.*

Emotions are part and parcel of our relationships. Indeed, relationships provide people with some of their most intense experiences of joy and sorrow, and people are most likely to experience intense emotion with close relational partners (Berscheid, 1983). In this chapter, emotion is conceptualized as an affective reaction to an event that is appraised as potentially beneficial or harmful to one's goals. Emotion is further conceptualized in terms of physiological reactions and action tendencies, which can ultimately affect the way emotions are communicated in relationships. The chapter then

provides an in-depth look at the nonverbal behaviors associated with affectionate emotion, hostile emotion, sadness, and anxiety, followed by a discussion of nonverbal skills related to how the expression of these emotions may help people maintain close relationships.

## DEFINING EMOTION

Emotions have been defined various ways by different scholars. However, many scholars agree that emotions are affective states that occur in reaction to events that interrupt, impede, or enhance one's goals. As Frijda (1993) put it, "Emotions arise from encounters with events that are appraised as having beneficial or harmful consequences for the individual's concerns" (p. 387). Other researchers have conceptualized emotion in relation to action sequences or expectancy violations. For example, according to Berscheid (1983), emotion occurs when action sequences are interrupted. An action sequence is a series of hierarchically arranged goals and higher order plans, such as reading to a child in order to be a good parent or being affectionate as part of a plan to maintain one's marriage. When action sequences are interrupted (e.g., a parent is too busy to spend much time with a child; a married couple gets into a heated argument) arousal levels change, cognitive labeling begins, and emotions ensue.

Similarly, according to expectancy violations theory (Burgoon, 1993) and the social expectation model (Levitt, 1991; Levitt, Coffman, Guacci-Franco, & Loveless, 1994), emotions occur in response to deviations from expected behavior. When expectancies are not met, negative emotion follows; when expectancies are exceeded, positive emotion follows. Specifically, Burgoon (1993) theorized that positive violations of expectancies (e.g., someone you like unexpectedly gives you attention), lead to emotions such as joy, relief, and pride, as well as nonverbal behaviors such as affection and involvement. On the other hand, negative violations of expectancies (e.g., someone you like unexpectedly ignores you), lead to emotions such as anger, frustration, and disappointment, as well as flight-or-fight response tendencies. So following a negative expectancy violation, a person might withdraw from the interaction (flight) or become aggressive (fight).

Scholars have also distinguished between emotional experience and emotional expression (e.g., Guerrero, Andersen, & Trost, 1998). Emotional experience consists of affect, physiological states, and cognitive appraisal. Affect, which refers to the positive or negative valence of one's feelings, is often considered to be the most fundamental component defining emotion (Clore, Schwarz, & Conway, 1994; Frijda, 1986; Scherer, 1986). Indeed, Dillard and Wilson (1993) reported that affective valence is often a much better predictor of outcomes than discrete emotions. Physiological reactions are also good predictors of psychological states and are often evident in one's behavior

(Blascovich, 2000; Gottman, Jacobson, Rushe, & Shortt, 1995). Cross-cultural research has demonstrated that people tend to experience particular profiles of physiological changes when experiencing various emotions. For example, intense joy tends to be accompanied by a warm temperature and accelerated heartbeat, while sadness tends to be accompanied by tense muscles and a lump in one's throat (Scherer & Wallbott, 1994). Finally, people cognitively appraise their feelings and the situation to make sense of emotion-inducing events (Omdahl, 1995). According to Lazarus's (1991) appraisal theory of emotion, people engage in primary appraisals to determine affective valence (e.g., is this event harmful or beneficial?), while secondary appraisals involve determining how personally relevant and important an event is. Consistent with work on emotion as emanating from expectancy violations and action sequence interruption, Lazarus (1991) theorized that situations appraised as facilitating goals produce positive emotion, whereas situations appraised as disrupting goals produce negative emotion.

Emotional expression is based both on action tendencies and display rules. Although action tendencies can also be conceptualized as part of emotional experience because they represent impulses to act in a particular way, we discuss them here as a critical component that helps shape emotional communication. Action tendencies are biologically based behavioral responses that aid individuals in coping with emotion and adapting to their environment (Lazarus, 1991; Smith & Lazarus, 1990). Emotions can be distinguished from one another based on differences in action tendencies (e.g., Frijda, 1987; Frijda, Kuipers, & ter Schure, 1989). For example, the action tendency associated with fear is self-protection in the form of withdrawal or defense, whereas the action tendency associated with guilt is reparation, often in the form of apologizing and making amends (Frijda, 1993; Lazarus, 1991). Of course, people do not always communicate in ways that are consistent with action tendencies. Instead, display rules reflecting norms and rules of social appropriateness may regulate how an emotion is eventually expressed (Planalp, 1999). People may exaggerate, downplay, or suppress the expression of felt emotions, pretend to be feeling an emotion they are not experiencing, or act as if they are experiencing a different emotion that they are actually feeling (Andersen & Guerrero, 1998b; Ekman & Friesen, 1975; Saarni, 1993).

## **NONVERBAL EXPRESSIONS OF EMOTIONS IN RELATIONSHIPS**

Although a wide variety of emotions are experienced and expressed in close relationships, some emotions are especially important in close relationships because they are typically triggered by social interaction with others, are often expressed within the context of interpersonal interaction,

and have important relational implications. Based on Guerrero and Andersen's (2001) classification of social emotions as well as Shaver, Schwartz, Kirson, and O'Connor's (1987) work on emotion prototypes, two clusters of emotions appear to be particularly germane to the functioning of close relationships: affectionate (love, passion, warmth, liking, joy) and hostile (anger, jealousy, envy, disgust, contempt) emotions. Indeed, research suggests that it is imperative that partners experience and express more affectionate emotion than hostile emotion if they wish to maintain satisfying relationships (Gottman, 1994; Guerrero & Andersen, 2001).

Evolutionary theorists have also argued that these clusters of emotion are related to two overarching issues of social life: getting along, which involves cooperation and affiliation, and getting ahead, which involves dominance and competition (Hogan, 1982; Dillard, 1998). As Dillard (1998) asserted, emotions "such as liking and loving are social adhesives insofar as they bind individuals together in friendships, coalitions, and mating pairs . . ." whereas ". . . dark side affects [such as anger and jealousy] underlie threat and attack, two other means of acquiring resources" (p. xxiii). Of course, as Dillard contended, the distinction between these two systems is not always clear. Sometimes negative emotion functions as a mechanism to repair problems and ultimately maintain relationships, as would be the case if jealousy caused a person to appreciate a partner more or anger led to a discussion about how to make a relationship more equitable.

Research also suggests that emotions related to sadness/depression and anxiety/fear play important roles in some close relationships, especially when one or both partners tends to experience one of these emotions on a regular basis. Depressed individuals display an unskilled profile of nonverbal communication that can lead to rejection, thwart the development of close relationships, and cause relational problems (Segrin, 1998). Similarly, individuals who are socially anxious may have trouble initiating relationships and confronting relational challenges (Guerrero & Andersen, 2001). Attachment theorists have also shown that individuals who experience anxiety over abandonment (i.e., they worry that their partners do not love them enough or will leave them), tend to display a profile of nonverbal behavior that is more passive and less affectionate than the behavior of secure individuals (e.g., Feeney, Noller, & Roberts, 1998; Guerrero, 1996). Before discussing more specifically how sadness and anxiety are communicated, we summarize research showing how the affectionate and hostile emotions are commonly expressed nonverbally in relationships.

### **The Affectionate Emotions**

Affectionate emotions are particularly social because they tend to be directed toward a person. For example, in a study on the antecedents of emotion, Schwartz and Shaver (1987) found that 100% of their subjects mentioned

a person when referencing love, while 40% of their subjects reported experiencing joy in the context of close relationships. Similarly, people commonly define passion as an emotional and motivational state that is directed toward increasing closeness with another person (Regan & Berscheid, 1996). From an evolutionary perspective, emotions such as joy, affection, and interpersonal warmth are valued because they help groups and dyads bond and cooperate with one another, which increases the survival advantage of a group or pair (Dillard, 1998). These emotions, including passion, are also essential in promoting the reproduction of the human race (Buss, 1994). In general, the affectionate emotions are expressed through nonverbal immediacy cues that show: (a) availability for and interest in communicating, (b) sensory stimulation, (c) psychological and physical closeness, and (d) positive affect (Anderesen, 1985). A variety of nonverbal behaviors are related to the display of affectionate emotion (see Table 5.1).

**Love and Passion.** People commonly express love using both verbal and nonverbal messages. In the study by Shaver et al. (1987), the love prototype included emotions such as love, passion, affection, and desire. Several nonverbal behaviors were related to the love prototype, including seeking physical closeness, having sex, touching, petting, hugging, holding, cuddling, mutual gaze, and smiling. Similarly, Marston and Hecht conducted several studies that help identify the various behaviors people intentionally use to communicate love, as well as those that people interpret as communicating love (Hecht, Marston, & Larkey, 1994; Marston & Hecht, 1994; Marston, Hecht, Manke, McDaniel, & Reeder, 1998; Marston, Hecht, & Robers, 1987). According to this program of research, people communicate love verbally through actions such as saying "I love you," writing notes and letters, discussing the future, self-disclosing about intimate topics, and talking through relational problems. The list of nonverbal behaviors used to communicate love is even more extensive, although Marston and Hecht (1999) maintained that there is "an approximate balance between verbal and nonverbal communication" overall (p. 286). Nonverbal behaviors found to communicate love include facial expressions that convey warmth and caring, smiling, loving gaze, sitting or standing close to one another, touch, sex, warm vocal tones, spending time together, giving gifts, giving and wearing rings, and dressing a certain way for one another (see also, Fitness & Fletcher, 1993; Shaver et al., 1987).

Marston and Hecht's work uncovers individual differences in how people communicate love. People who have an intuitive love style experience love primarily through physiological responses, such as feelings of interpersonal warmth and passion, nervousness, and/or loss of appetite. Because love is rooted in intuition and emotion for these individuals, it makes sense that they would tend to express their love nonverbally more than verbally. Peo-

TABLE 5.1  
Nonverbal Behaviors Associated With the Affectionate Cluster of Emotions

<i>Kinesic Behaviors</i>
Mutual gaze
Smiling
Facial warmth or pleasantness
Primping or preening*
Pouting or other childlike behaviors*
Head tilts
Adaptors
Demure downward gaze*
Direct body orientation
Forward lean
Communicating on the same physical plane
Reinforcing head nods
<i>Proxemic and Haptic Behaviors</i>
Close proximity
Sexual touch, having sex*
Affectionate touch
<i>Vocalic Cues</i>
Babytalk*
Laughing with someone
Soft, warm vocal tones
Vocal expressiveness (especially in terms of variation in pitch and tempo)
Vocal reinforcers (such as “umm hum”)
Vocal interest (e.g., sounding enthusiastic)
<i>Environmental Cues, Appearance, and Artifacts</i>
Giving gifts
Creating a romantic environment*
Exchanging and wearing rings
Dressing up or enhancing one's appearance
<i>Chronemic Cues</i>
Spending time together
Being patient
Focusing on the partner rather than task or other activities

\*Behaviors related to passion and courtship in particular

ple who have a secure love style, on the other hand, tend to use verbal strategies for expressing love. Secure love, as described by Hecht et al. (1994), involves a focus on self-disclosure, trust, and security.

Marston and Hecht's program of research also identifies behaviors that are specific to passionate love, including giving romantic gifts or making an

environment romantic by lighting candles or putting roses on a bed (see Marston et al., 1998, in particular). Behaviors such as touching, holding one another, and having sex are also related to passion (Marston et al., 1998) as are flirtatious behaviors (Koeppel, Montagne, O'Hair, & Cody, 1993). Based on a review of the literature distinguishing seductive or passionate behavior from friendly behavior, Koeppel and colleagues concluded that seductive behavior is characterized by more child-like expressions (such as pouting and babytalk), more head tilts, preening and priming behavior (such as fixing one's makeup or adjusting one's clothing), more adaptors (such as playing with buttons or twirling one's hair around a finger), more demure glances downward, increased laughter, and softer, warmer vocal tones. Of course, people sometimes use flirtatious behaviors for reasons other than showing passion or sexual interest, such as getting attention or trying to persuade someone to do something. In addition, men are more likely to interpret friendly behavior as seductive than are women, which can lead to misunderstandings (Abbey, 1982, 1987).

**Warmth and Liking.** In comparison to seductive or passionate behaviors, interpersonal warmth is more closely related to friendliness and liking than sexual attraction. Interpersonal warmth has been defined as "the pleasant, contented, intimate feeling that occurs during positive interactions" with others (Andersen & Guerrero, 1998b, p. 304). Concepts such as intimacy, emotional connection, caring, liking, affection, and fondness are all related to the construct of interpersonal warmth. Although little research has been conducted on interpersonal warmth per se, a considerable amount of research has been conducted on these related constructs. Clarke, Allen, and Dickson (1985) labeled warmth as a positive emotion that is highly characteristic of people's feelings for close relational partners, such as wives' feelings for their husband and children.

Nonverbally, warmth is communicated by means of many of the same immediacy behaviors that convey love and liking (see Andersen & Guerrero, 1998a). Proxemic and haptic behaviors that decrease the physical and psychological distance between people often communicate warmth. For example, close conversational distances, direct body orientation, forward lean, communicating on the same physical plane (i.e., a parent sitting at a child's level), and positive forms of touch send powerful messages of closeness and connection. Many kinesic behaviors are also instrumental in sending messages of closeness. Smiling, nodding one's head to indicate agreement, tilting one's head toward someone, using gestures that show interest and animation, engaging in mutual eye contact, and having a relaxed, open body position are representative of kinesic behaviors that show warmth and liking. Vocalic behaviors such as speaking in a warm tone, being vocally expressive, and using vocalizations such as "uh-huh" and "mm-



hmmm” to show agreement and interest, convey interpersonal warmth as do chronemic behaviors such as spending time with another person, being patient, and focusing on a conversational partner rather than other tasks. Indeed, one study (Egland, Stelzner, Andersen, & Spitzberg, 1997) demonstrated that spending time with one’s partner was the most important indicator of intimacy and liking.

**Joy.** Although not as social as some of the other emotions in the affectionate cluster, when people experience happiness they are very likely to share their feelings of joy with others (Rimé, Mesquita, Philippot, & Boca, 1991). Happiness is also one of the most universally recognized facial expressions. Young children as well as individuals from different cultures can usually identify happy faces easily, which are characterized primarily by smiling with cheeks rising upward (Ekman, Friesen, & Ellsworth, 1972; Scherer & Wallbott, 1994). Happiness is characterized by action tendencies that involve approaching people and things (Lazarus, 1991). The tendency for happy people to approach others is evident in their nonverbal displays; individuals experiencing joy tend to seek contact with others and appear more socially engaged during interaction due to their tendency to use expressive behavior. In the study by Shaver et al. (1987) on emotion prototypes, people described joyful behavior in terms of being physically energetic, bouncy, bubbly, “jumping up and down,” smiling, and having a bright, glowing face. In this same study, a joyful voice was described as enthusiastic and excited, with laughter and giggling. Similarly, Scherer and Oshinsky (1977) demonstrated that happiness is associated with vocal characteristics such as fast tempo and variation in pitch.

### **The Hostile Emotions**

In the analysis by Shaver et al. (1987) of emotion terms, anger, jealousy, envy, disgust, and contempt all clustered together as part of an anger prototype. Thus, we will discuss these emotions in relation to a hostility cluster (Guerrero & Andersen, 2001). All of these emotions can cause problems in relationships, and all can lead to spirals of negative behavior. In each case, these emotions typically involve a negative expectancy violation. A partner may have been treated unfairly (leading to anger), may have been cheated on (leading to jealousy), or may have acted in an unacceptable manner (leading to contempt). Moreover, these emotions are inherently relational because they are directed at someone. Indeed, Shaver et al. (1987) found that the most common cause of anger was the belief that a situation was illegitimate, wrong, unfair, or contrary to what ought to be. Other common causes of anger revolved around being threatened or losing power. Similarly, romantic jealousy necessarily involves believing that one’s relation-

ship is threatened by a third party (Guerrero & Andersen, 1998b; White & Mullen, 1989) and contempt implies feeling superiority over someone (Gottman, 1994). Research suggests that people communicate hostile emotions such as these in various ways (see Table 5.2).

TABLE 5.2  
Nonverbal Behaviors Associated With the Hostile Cluster of Emotions

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*Kinesic Behaviors*

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Attacks on objects (pounding on or throwing something)  
 Slamming doors  
 Unpleasant facial expressions (frowning; expressions of anger, disgust or contempt; cold, dirty, or mean looks)  
 Bodily tightness or rigidity  
 Heavy walking or stomping  
 Gritting teeth  
 Threatening gestures  
 Clenching hands or fists  
 Crying  
 Looking hurt or anxious  
 Acting defensive  
 Flirting with another to make the partner jealous\*  
 Withdrawing sex or affection  
 Lack of eye contact  
 Intimidating eye contact (the evil eye)  
 Being especially nice and affectionate\*

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*Proxemic and Haptic Behaviors*

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Moving away from the partner  
 Moving closer to intimidate the partner  
 Looking down at the partner  
 Violent/aggressive touch

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*Vocalic Cues*

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Loud voices (yelling, screaming, shouting)  
 Sarcasm  
 Condescending tone of voice  
 Laughing at someone

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*Appearance and Artifacts*

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Giving gifts\*  
 Enhancing one's appearance\*

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*Chronemic Cues*

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Spending time apart  
 Monopolizing the partner's time\*

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\*Cues related to jealousy in particular.

**Anger.** The action tendency associated with anger is to attack as a way of defending oneself (Lazarus, 1991). This attack tendency is evident when one considers the nonverbal behaviors typically associated with anger. For example, Shaver et al. (1987) found that people commonly associated a variety of aggressive, unpleasant behaviors with anger expression. Vocally, people reported that yelling, screaming, and shouting show anger. Shaver and colleagues also identified a host of kinesic behaviors related to anger, including attacks on objects (e.g., pounding on something, throwing things), nonverbal displays of disapproval (e.g., slamming doors and walking out), unpleasant facial expressions (e.g., frowning, knit brows, mean expression), bodily tightness or rigidity, heavy walking or stomping, gritting teeth, threatening gestures, clenched hands or fists, and crying. People also reported suppressing anger-related emotions under certain circumstances. Similarly, Roseman, Wiest, and Swartz (1994) uncovered the following action tendencies for anger—feeling like hitting someone and feeling like yelling at someone. These action tendencies translated into saying something nasty to the target of one's anger, and well as being motivated to hurt or get back at the person who evoked anger.

Despite the tendency for people to respond to anger with aggression, scholars have suggested that anger and aggression do not always go hand-in-hand (Canary, Spitzberg, & Semic, 1998; Guerrero, 1994; Sereno, Welch, & Braaten, 1987). Sometimes people are able to manage their anger displays so they can calmly and assertively (rather than aggressively) discuss problematic issues. Obviously, such an approach would involve eschewing one's natural inclination to attack, and instead inhibiting, masking, or de-intensifying one's negative affect. However, research also suggests these people may experience more physiological stress in terms of increased heart rate, blood pressure, and skin conductance when they inhibit expressing anger (Buck, 1979). Thus, it is probably important to deal with the anger directly in an assertive fashion rather than simply ignoring one's angry feelings.

**Jealousy.** Relational jealousy occurs when people believe (rightly or wrongly) that the existence or quality of their relationship is threatened by a third party (Guerrero & Andersen, 1998b). While the prototypical jealousy experience occurs within a romantic relationship, friends and family members can also become jealous. For instance, an old friend might worry that he or she will be replaced by a new friend. While the cause of relational jealousy is fairly clear, jealousy is often a complex emotional experience, with different emotions coming into play depending on the circumstances (Guerrero, Trost, & Yoshimura, 2005). Consistent with work by Shaver et al. (1987), jealousy often involves feeling anger over being betrayed. But jealousy can also evoke fear because an individual is worried about losing a valued relationship. Other emotions that may be part of the jealousy experi-

ence include sadness, envy (of the rival's positive characteristics), guilt (about being jealous or causing the partner to become interested in a third party), and passion (White & Mullen, 1989).

Research on communicative responses to jealousy (Guerrero & Andersen, 1998b; Guerrero, Andersen, Jorgensen, Spitzberg, & Eloy, 1995) and mate retention strategies (Buss, 1988; Buss & Shackelford, 1997) has identified several ways that people nonverbally react to jealousy. Individuals often show their negative affect, either spontaneously or in an effort to manipulate the partner, by crying, looking hurt, or appearing anxious. Jealous individuals sometimes monopolize their partner's time and stay close to them at parties or other social gatherings as a way to restrict their access to rivals. Another nonverbal strategy involves flirting with others in an attempt to cause the partner to feel jealous too. Other jealous responses are similar to those used when people are angry; jealous individuals sometimes argue with or accuse their partners using loud sarcastic voices, they sometimes slam doors or throw objects, and, unfortunately, they sometimes use violent behaviors that inflict physical harm on the partner or rival. Jealous individuals, like angry individuals, sometimes use passive aggressive behaviors, such as giving cold or dirty looks, angrily leaving the scene, or withdrawing sex or affection. Finally, once in awhile jealous individuals engage in more constructive forms of communication designed to win back the partner or maintain their relationships. These behaviors including giving gifts, enhancing one's physical appearance, and being especially nice and affectionate (Buss, 1988; Guerrero et al., 1995).

A recent study suggests that jealous individuals may be more likely to use certain nonverbal behaviors depending on the specific emotions they experience (Guerrero et al., 2005). As expected, people were most likely to report engaging in aggressive behavior (e.g., yelling), passive aggressive behavior (e.g., giving cold or dirty looks), manipulation (e.g., flirting with someone to get the partner jealous) and violent behavior toward objects (e.g., slamming doors) when they experienced high levels of anger. Jealous people were most likely to report using or threatening to use violence against other people when they felt high levels of anger (hostility) and low levels of guilt. Finally, people were most likely to report using positive behaviors such as giving gifts, being more affectionate, and enhancing appearance when they experienced low levels of anger (or hostility) and high levels of fear and envy. For these individuals, maintaining the relationship in the face of a serious threat may be more important than getting back at the partner.

**Envy.** Although laypeople often use the terms jealousy and envy interchangeably, scholars have made an important distinction between these concepts. As noted above, jealousy occurs when people are worried that

something they have (e.g., a valued relationship, a social position) is in jeopardy of being altered or taken away. In contrast, envy occurs “when a person lacks what another has and either desires it or wishes the other did not have it” (Parrott, 1991, p. 4). Relational envy occurs when these feelings arise toward a romantic partner, friend, or family member. For example, David might be envious that Tina has a better job than he does, or Tina might envy her best friend’s good looks, wealth, or intelligence. As these examples illustrate, envy involves a negative self-to-other comparison (Guerrero & Andersen, 1998a). In other words, a person perceives that he or she is not as good or has less than another person. However, only comparisons in areas that are highly relevant to one’s self-concept produce envy (e.g., Salovey & Rodin, 1989; Salovey & Rothman, 1991). So David would only be envious of Tina’s job if being successful in his career was an important part of his self-concept.

Little research has specifically looked at envious communication, although scholars have suggested that there are two basic behavioral reactions: malicious behaviors designed to harm the target of one’s envy (e.g., vandalizing their car, sabotaging them at work) and constructive behaviors designed to improve oneself (Parrott, 1991; Smith, 1991). Even less research has mentioned nonverbal behaviors reflecting envy. However, Messman’s (1995) work on competitiveness suggests that some forms of nonverbal communication may show envy. Specifically, Messman argued that competitiveness, like envy, occurs when people make social comparisons for the purpose of self-evaluation. She had students describe the types of behaviors they view as competitive. Within a longer list of behaviors, several nonverbal behaviors emerged, including: (a) belittling rivals by laughing at them or their ideas, (b) using aggressive or intimidating behaviors such as yelling at the rival or giving the rival the evil eye, (c) manipulating the rival by acting phony, being sarcastic, or using condescending behavior, (d) showing disinterest and avoidance through behaviors such as lack of eye contact and far proxemic distancing, and (e) acting nervous and defensive in competitive situations with a rival.

**Disgust and Contempt.** According to Gottman (1994), expressions of disgust and contempt can be especially harmful to relationships. Disgust involves being fed up and disappointed with someone. Contempt also involves feeling superior in comparison to another. Both of these emotions are related to dislike. Thus, contempt is an inherently social emotion because, in contrast to envy, it involves making a positive self-to-other comparison.

Gottman’s (1994) research suggests that disgust is typically communicated by “sounding fed up, sickened, and repulsed” (p. 24). Thus, tone of voice may be particularly instrumental in conveying disgust. Other studies

have suggested that a wrinkled nose, downwardly drawn brows, pursed lips or a raised upper lip, and silence show disgust (Izard, 1991; Roseman et al., 1994; Scherer & Wallbott, 1994; Wiggers, 1982). According to Gottman, contempt is communicated by “any insult, mockery, or sarcasm or derision, of the other person. It includes disapproval, judgment, derision, disdain, exasperation, mockery, put downs, or communicating that the other person is absurd or incompetent” (p. 24). Nonverbally, contempt is expressed by the following facial expressions: (a) one or both eyebrows are raised, (b) the head is tilted up to one side while the eyes are looking downward, (c) the chin is raised, and (d) one side of the upper lip is raised (Izard, 1991; Wiggers, 1982). This type of facial expression literally shows that the contemptuous person is looking down at someone. Sarcasm, looking astonished, and looking away from someone in disbelief or disgust also show contempt. Gottman (1994) argued that even subtle nonverbal behaviors that show disgust and contempt can trigger a negative cycle of destructive communication in relationships. Specifically, expressions of disgust and contempt can lead to stonewalling or withdrawal. If stonewalling persists, Gottman contends that relationships will stagnate and conflict will become increasingly futile and destructive.

### **Sad and Anxious Emotions**

As we will demonstrate shortly, both sad and anxious emotions are associated with a profile of nonverbal behaviors that reflect a lack of social skill (see Table 5.3). Thus, the experience and expression of these emotions may have a profound effect on the way relational partners perceive one another and the way that relationships function. Conversely, having reoccurring interpersonal problems or being in a dissatisfying relationship may cause people to experience these emotions and communicate with less skill.

***Sadness and Depression.*** Although sadness may not be as interpersonal as emotions found in the affectionate and hostile clusters, Shaver et al. (1987) found that losing people and relationships were among the most common events leading to sadness. Scholars have identified several facial expressions associated with sadness (see Table 5.3), including narrowing the eyes, pulling the corners of the mouth down in a frown (sometimes with lips trembling), jutting the chin forward (sometimes with the jaw quivering), and looking down or away (Ekman & Friesen, 1975; Izard, 1991; Segrin, 1998). Sad or depressed individuals also tend to look lifeless, with dull eyes, slumped posture, defensive positioning, less head nodding, and infrequent gesturing (Guerrero & Reiter, 1998; Segrin, 1998; Shaver et al., 1987). Vocally, depression and sadness are communicated through crying, silence, longer response latencies, slower tempo, lower pitch and volume, and less expres-

TABLE 5.3  
Nonverbal Behaviors Associated With Sadness/Depression and Anxiety/Fear

<i>Sadness/Depression</i>	<i>Anxiety/Fear</i>
<i>Kinesic Behaviors</i>	<i>Kinesic Behaviors</i>
Narrowed eyes	Raised eyes with brows drawn together
Frowning	Wide-opened eyes
Trembling mouth	Tight lips pushed inward
Jutted chin (sometimes with a quivering jaw)	Reduced eye contact*
Reduced eye contact/looking down or away	Little emotional expression*
Dull eyes	Fidgeting and random movement*
Slumped posture	Blocking behaviors
Defensive body positioning	Adaptors
Less head nods	Less head nods*
Less gesturing	
Moping around the house	
<i>Vocalic Cues</i>	<i>Vocalic Cues</i>
Crying or sobbing	Screaming**
Silence	Fast tempo
Longer response latencies	High pitch
Slow tempo	Nonfluencies
Low pitch and volume	Nervous laughter
Less vocal expressiveness	
Less vocal warmth	

\*Specific to social anxiety.

\*\*Specific to fear.

siveness and warmth (Izard, 1991; Scherer, 1986; Segrin, 1998). Some sad individuals also engage in behaviors such as moping around the house and failing to engage in routine behaviors (such as going to school or work), while others engage in routine behavior as well as extra activity to try to distract themselves from their problems (Guerrero & Reiter, 1998).

According to Coyne's (1976) interactional model of depression, depressed people who engage in the nonverbal behaviors we identified above are likely to be rejected by others. Coyne theorized that this rejection occurs because interacting with someone who is in a bad mood is an unpleasant experience, and because people may tend to become sad themselves when interacting with a depressed partner due to an emotional contagion effect. Segrin (1998) summarized research showing that although rejection is fairly commonplace, the emotional contagion effect may not be quite as robust: "the phenomenon of interpersonal rejection of depressed persons is very reliable and moderate in magnitude across studies. . . . However, the extent to which depressed people create a negative affective state in others through social interaction is weaker and more sporadic" (p. 218). Segrin (1998) implied that the main culprit leading to rejection and interpersonal

problems for depressed people may lie in the fact that depressed individuals are simply less socially skilled than nondepressed individuals.

**Social Anxiety.** Social anxiety may also inhibit people's ability to develop relationships while also associating with interpersonal problems in long-term relationships. According to Leary and Kowalski (1995), social anxiety tends to occur when people are worried that they won't make a good impression on others. More generally, fear is a reaction to impending danger. Anxiety and fear are communicated in a variety of ways (see Table 5.3). The fearful face is marked by raised eyebrows that are drawn together, wide-opened eyes, and tight lips pushed inward (Ekman & Friesen, 1975). When people are socially anxious, they tend to avoid eye contact and show little emotion (Burgoon & Koper, 1984; Leary & Kowalski, 1995). Vocally, people communicate anxiety or fear through a fast, fairly uniformly high pitched voice, nonfluencies, and nervous laughter (Scherer, 1986). Fidgeting, random movement, blocking behaviors (such as covering the face or body), adaptors (such as twisting one's hair or ring), reduced kinetic expressiveness, and less head nodding are also related to social anxiety and nervousness (Burgoon & Koper, 1984; Carlson & Hatfield, 1992).

In relationships, people often experience social anxiety when they are uncertain about their partner's feelings or the future of their relationship. People who experience high levels of social anxiety have a harder time initiating relationships (Guerrero & Andersen, 2001). Once in relationships, people with fearful attachment styles (e.g., those who worry about getting hurt or rejected) show a pattern of passive, socially unskilled behavior. Specifically, when interacting with their romantic partners, individuals with fearful attachment styles have been shown to use less gaze, more backward lean, more expressions of negative affect, and more nonfluencies than individuals with secure attachment styles (Guerrero, 1996). Fearful individuals also rate themselves lower than secure individuals on social skills related to expressivity (Guerrero & Jones, 2003).

## EMOTIONAL SKILL IN CLOSE RELATIONSHIPS

Clearly, emotions related to affection, hostility, sadness, and anxiety can be expressed nonverbally in a variety of ways. The question then becomes—how do such nonverbal expressions function within the context of close relationships? To begin to answer this important question, we discuss how emotional expression helps people maintain satisfying relationships by focusing on three interrelated nonverbal skills: the ability to encode, decode, and manage emotional expressions. Chapter 8 provides a complementary discussion of how emotional expression (as well as other forms of nonver-



bal communication) function in the contexts of conflict and relational disengagement.

Scholars have defined social, interactional, or communicative skill as the ability to encode, decode, and manage verbal and nonverbal messages in ways that are consistent with an individual's personal and relational goals (Spitzberg, 2000; Riggio, 1992). As Gesten, Weissberg, Amish, and Smith (1987) put it, social skills are "highly specific patterns of learned observable behavior, both verbal and nonverbal," through which people influence others and attempt to meet their needs (p. 27). Similarly, emotional intelligence has been defined in terms of having the skill to express, understand, and manage one's own and others' emotions (Bar-On, 1996; Bar-On & Parker, 2000; Salovey & Mayer, 1990). Most of the research examining nonverbal communication (as well as verbal communication) in the context of close relationships has been descriptive; typically scholars have uncovered nonverbal behaviors associated with various stages of relationships without establishing causation or focusing on the goals guiding people's communicative behavior (Dindia & Timmerman, 2003). Nonetheless, research suggests that people who possess skill in encoding, decoding, and managing emotional expression generally have an advantage when it comes to developing and maintaining close relationships.

### **Encoding Emotional Expression**

According to Burgoon and Bacue (2003), people who are skilled encoders are able to express their internal emotional states so that other people decode their emotions more easily and accurately, and in ways that help the encoder achieve her or his goals. Being able to express emotions in a way that maintains satisfying relationships is one mark of a successful encoder. Indeed, Burgoon and Bacue noted that skill in expressing affectionate emotion is a cornerstone in establishing and maintaining close relationships. Specifically, they contended that the "ability to express positive emotions has been linked to psychological well-being and so probably represents one of the more elemental aspects of skillful nonverbal expression" (Burgoon & Bacue, 2003, p. 188; see also Andersen & Guerrero, 1998b). Thus, communicators who can spontaneously display positive emotions such as love, joy, and warmth using the behaviors shown in Table 5.1, are likely to be evaluated as more nonverbally skilled. Research suggests that women may be better at encoding emotion in general (see Guerrero, Jones, & Boburka, in press; Hall, 1979, 1984 for reviews), and that this sex difference is especially robust when comparing how men and women encode affectionate emotion (Noller, 1984). However, research also suggests that both men and women have more difficulty encoding positive affect than negative affect (e.g., Koerner & Fitzpatrick, 2002).

Research demonstrates that nonverbal communication shares a stronger association with relational satisfaction than verbal communication. Based on a careful review of the literature, Kelly, Fincham, and Beach (2003) argued "When one studies the interactions of happy couples, it is often not the verbal content that stands out. Instead, what is remarkable is the pleasurable emotions couples appear to be experiencing—the smiles, laughs, affection, and warmth that happy couples show. Similarly, it is the agitation, tears, distress, anger, and coldness in distressed couples that are often immediately evident" (p. 729). Studies using diverse methodologies, including diaries (e.g., Kirchler, 1988, 1989) and observations (e.g., Gaelick, Bodenhausen, & Wyer, 1985; Noller & Ruzzene, 1991) of everyday interaction (e.g., Broderick & O'Leary, 1986) as well as conflict episodes (Gottman, Markman, & Notarius, 1977) have confirmed that satisfied couples experience and express more positive emotion than do dissatisfied couples. Karney and Bradbury's (1995) meta-analysis of longitudinal studies revealed that behavioral positivity, as measured at Time 1, was correlated with marital satisfaction at Time 2 at the .42 level for wives and the .37 level for husbands.

Positivity, affection, and romance have also been cast as key relational maintenance behaviors. Positivity involves creating pleasant interaction by using nonverbal and verbal behaviors, such as acting upbeat, cheerful, and optimistic, and giving the partner compliments (Stafford & Canary, 1991). Certainly, many of the behaviors related to warmth and liking, including smiling and vocal warmth, are essential to communicating positivity and have been shown to associate with an individual's overall perception of relational happiness (e.g., Birchler, Weiss, & Vincent, 1975). Affection, which includes physical contact such as touching, kissing, and having sex, has been identified as both a maintenance behavior (Dainton & Stafford, 1993) and as a strategy for intensifying relational closeness (Tolhuizen, 1989). Romance includes behaviors such as creating a romantic environment and giving each other items of sentimental value (Dindia, 2003; Simon & Baxter, 1993). In a study by Osgarby and Halford couples perceived the use of positive behaviors such as these to be critical in maintaining their marriages (as cited in Feeney et al., 1998). In fact, positive behavior may be even more important than negative behavior when discriminating between satisfied and dissatisfied couples. Fincham, Bradbury, Arias, Byrne, and Karney (1997) found that among couples who were similar in terms of negative behavior, those who used more positive behaviors were happier. In other words, positive behavior helps counterbalance some of the negativity within relationships. Similarly, Gottman's (1994) research has demonstrated that happy couples tend to use about a 1:1 ratio of positive to negative behaviors during conflict episodes, whereas unhappy couples tend to use about a 5:1 ratio. In a study of general marital interaction, Birchler et al. (1975) found that happy couples displayed around 30 positive behaviors for every one nega-

tive behavior, while unhappy couples display around four positive behaviors per negative behavior.

Of course, the expression of negative or hostile emotions is often inversely associated with relational satisfaction. As scholars have contended, the way that hostile emotions are expressed may be more important than the experience of emotion when predicting relational outcomes (e.g., Andersen, Eloy, Guerrero, & Spitzberg, 1995; Canary et al., 1998). Reviews of literature demonstrate that dissatisfied couples display more hostile emotion, along with more fear and sadness, than do satisfied couples (e.g., Gottman, 1994; Kelly et al., 2003; Weiss & Heyman, 1990, 1997). These same reviews document several behavioral manifestations of hostile emotions that typically associate negatively with relational satisfaction: frowning and other unpleasant facial expressions (such as cold or dirty looks), sarcasm and vocal unpleasantness, yelling, ignoring someone or becoming quiet, staring or looking away from someone, stiff or defensive body posture, turning away from the partner, and leaving the scene.

However, it is important to keep in mind that not all hostile expressions associate with relational dissatisfaction. For example, even though aggressive expressions of anger are typically evaluated as less competent than assertive expressions of anger (Canary et al., 1998), perceptions that a partner uses aggressive behavior when angry do not necessarily associate with relational satisfaction (Guerrero, 1994). This may be because anger is prototypically associated with aggression. Therefore, people are not surprised when their partners engage in aggressive anger responses, and are likely to forgive them for their hostile behavior as long as they do not become overly aggressive or violent (Canary et al., 1998; Spitzberg, 1997). In addition, angry episodes may only constitute a small slice of interaction within some relationships (Guerrero, 1994), with more mundane positive interaction counteracting aggressive episodes. Gottman's (1994) research also suggests that expressions of anger are less important in predicting relational dissatisfaction than are expressions of contempt and disgust.

In terms of jealousy, responses that involve yelling, active distancing (e.g., using cold or dirty looks, giving the partner the silent treatment, angrily leaving the scene), violence (e.g., hitting or shoving the partner, slamming doors or throwing objects), avoidance, and expressing negative emotions such as fear or anxiety, tend to associate negatively with relational satisfaction (Andersen et al., 1995; Timmerman, 2001). However, the study by Andersen et al. suggests that expressing negative affect is sometimes beneficial. Specifically, they found that people who reported expressing negative affect while discussing jealous issues in a calm manner tended to perceive high levels of relational satisfaction. In contrast, those who expressed negative affect alongside aggressive or passive aggressive behavior tended to report less relational satisfaction. This finding seems to mir-

ror more general patterns showing that the “frequency of positive behavior needs to greatly outweigh negative behavior to ensure a happy relationship” (Kelly et al., 2003, p. 730). Moreover, Andersen et al. (1995) argued that expressing some negative affect may be helpful when communicating about jealousy so that the partner will empathize with the negative feelings the jealous person is experiencing.

### **Decoding Emotional Expression**

In addition to studying message production or encoding, scholars have studied decoding as an important communication skill. Decoding refers to the way a receiver assigns meaning to and interprets a behavior or set of behaviors. Planalp, DeFrancisco, and Rutherford’s (1996) research suggests that decoding is complex because of the multimodal nature of many emotional expressions. Specifically, people typically decode emotions based on between four and six modalities. These modalities most frequently include the voice, face, and body, as well as indirect verbal cues (such as name-calling or apologizing), physiological cues (such as blushing or changes in breathing), and activity cues (e.g., hugging someone, slamming a door, taking a walk). Direct verbal cues (such as saying “I’m really mad”) occurred much less often. Planalp et al. (1996) concluded that decoding emotions involves observing a complex combination of behaviors (some of which are subtle) that unfold over time in somewhat unpredictable sequences. A skilled decoder is able to discern how the various cues work together to show emotion, rather than focusing on one or two cues in isolation or examining the cues as an aggregate or average.

Indeed, being able to accurately decode the emotional experiences of others is a difficult task. While the so-called basic emotions, such as anger, joy, and sadness, are fairly easy to decode based on facial expressions and vocal tone, other emotions, such as jealousy, envy, love, disgust, and contempt are more difficult to decode (Burgoon & Bacue, 2003). In their review, Burgoon and Bacue point out several factors that affect people’s decoding ability. First, in order to accurately decode emotional information, an individual needs to have a working knowledge of display rules (such as when people tend to intensify, inhibit, or simulate emotion) so that he or she will be able to ascertain whether the person displaying (or not displaying) emotion could be experiencing something different than he or she is communicating. Second, people must be able to distinguish between posed (fake) and spontaneous (real) emotional expressions, with the former (ironically) being easier to decode. Thus, if a sender exaggerates an emotional display of sadness, most decoders would be able to identify the expression as a sad one easily, but a skilled decoder might also question whether sadness is really being experienced as intensely as the display suggests. Third, individ-

ual difference variables, such as age, sex, and personality affect decoding ability. For example, people become more skilled decoders as they move from infancy to early adulthood (Burgoon & Bacue, 2003).

Another individual variable that has received considerable attention is the sex of the communicator. The vast majority of studies have demonstrated that women have an advantage over men when it comes to decoding emotional information (Guerrero & Reiter, 1998; Hall, 1979, 1984; Hall, Carter, & Horgan, 2000; Riggio, 1986), with effect sizes ranging from small to moderate (but see Koerner & Fitzpatrick, 2002 for an exception). Women may be better decoders because they exhibit behaviors that correlate with listening and empathy. As Burgoon and Bacue (2003) summarized, women tend to talk less, listen more, and interrupt less; they also tend to show more interest and receptivity and to recognize faces better than men. These behaviors paint a profile of someone who can concentrate on emotional cues while also encouraging senders to open up and express themselves freely. Interestingly, however, the female advantage in decoding diminishes somewhat in close relationships, with men showing more decoding accuracy as their relationships develop and they get to know their partners better (Zuckerman, Lipets, Kolrumaki, & Rosenthal, 1975). Furthermore, this sex difference seems to disappear completely when men and women are decoding deceptive cues (Hurd & Noller, 1988).

Decoding accuracy is associated with relational satisfaction. In fact, Gottman and Porterfield (1981) suggested that decoding ability may be even more important than encoding ability in predicting marital adjustment. Noller and Ruzzene (1991) videotaped couples engaging in conflict and then had spouses report the emotions they had been experiencing at different points during the conflict episode. They found that partners in satisfying relationships had less difficulty decoding each other's emotions accurately than partners in dissatisfying relationships. Similarly, Burleson and Denton (1997) found decoding ability to associate positively with relational satisfaction for happy couples and Sabatelli, Buck, and Kenny (1986) found that women had fewer marital complaints when they were good at decoding their husbands' emotions.

One reason that decoding ability is so important lies within response patterns. Researchers have established that the way partners decode one another's emotional expressions affects their responses. For example, in Gaelick, Bodenhausen, and Wyer's (1985) observational study of conflict episodes, spouses reciprocated affectionate or hostile emotion depending on what they decoded their partner as communicating. However, partners had more difficulty decoding affectionate emotions, which led to more reciprocity of hostile affect. The correlations between what people perceived their partners to feel, and what they communicated, ranged from .75 to .84 across both hostile and affectionate emotion. However, correlations between one

partner's intentions to communicate affectionate emotion, and the other partner's perception that affection was communicated were nonsignificant (i.e.,  $r = .11$  when husbands were the encoders, and  $.14$  when wives were the encoders). In contrast, these correlations were significant for hostility; when wives intended to show hostile emotion, their husbands tended to report that hostility had been communicated ( $r = .38$ ). When husbands were the encoders, this relationship was even more robust ( $r = .65$ ), with husbands' intentions to show hostility correlated with wives' perceptions that hostility had indeed been communicated. Similarly, Noller (1980) found that people were better at decoding negative affect via vocal tone than positive affect. Taken together, these results suggest that people miss some of the affection that their spouses are trying to communicate to them during conflict episodes.

This is no trivial matter, especially since scholars know that people often match one another's emotional experiences and expressions within a given interaction, as the Gaelick et al. (1985) study demonstrated. Similarly, Hatfield, Cacioppo, and Rapson (1994) discuss the process of *emotional contagion*, which occurs when people catch the emotions of others in a way similar to catching a virus. When one partner is hostile, this negativity may be passed on to the other partner, who will in turn experience and express more hostility. Emotional contagion can also create a positive communicative environment that is conducive to relational satisfaction. In the case of joy and other affectionate emotions, Oatley and Johnson-Laird (1987) noted that, "the social communication of emotions leads each actor to become aware of the other's euphoric feelings, and a euphoric mutual emotion is created. Such emotions act to cement social relations" (p. 46). Unfortunately, however, if affectionate emotions are not decoded as accurately or as frequently as hostile emotions, negative rather than positive cycles of emotional expression are more likely to ensue.

It may not be enough, however, to simply recognize when one's partner is expressing positive, negative, or neutral affect. Koerner and Fitzpatrick (2002) argued that it is just as important for spouses to be able to attribute one another's emotions correctly to either relational or nonrelational sources. For example, in satisfying relationships partners are likely able to recognize when positive affect is attributable to the relationship as well as when negative affect is attributable to external causes. In dissatisfying relationships, partners may decode negative affect as attributable to relational causes when it would be more accurately attributable to external causes. The reverse could hold true for positive affect, with partners in dissatisfying relationships failing to attribute displays of joy, liking, or other positive emotions to relational causes. In line with this reasoning, Koerner and Fitzpatrick demonstrated that individuals who could decode their spouse's nonrelational negative affect and relational positive affect reported more

marital satisfaction. Being able to decode relational negative affect and nonrelational positive affect, however, were uncorrelated with marital satisfaction.

The husband's ability to decode and attribute emotions correctly may be especially important in predicting joint marital satisfaction. Gottman and Porterfield (1981) found that husbands' rather than wives' ability to decode affect was positively related to marital satisfaction. Similarly, Noller's (1980, 1992) research demonstrated that the husband's ability to decode emotional information was a particularly good predictor of marital satisfaction. In dissatisfying relationships, husbands were more likely to decode their wives' neutral expressions as conveying negative emotions. For instance, unless his wife's vocal tone is pleasant, a husband in a dissatisfying relationship may decode her emotion as negative. The husband's ability to discriminate between negative affect that stems from relational versus external causes is also particularly important. As Koerner and Fitzpatrick (2002) argued:

Wives' negative affect, if not attributed correctly to factors external to the relationship, is likely to be interpreted by husbands as negative affect about the relationship or themselves. Clearly, such interpretations would lead husbands to be less satisfied because they would interpret the negative affect as an indication that either they themselves or the relationship is unfulfilling for the partner. Being able to attribute such negative affect correctly, however, allows them to regard their role in their relationship more realistically, as more positive and as more satisfying. (p. 48)

Thus, husbands who decode emotional information accurately and also attribute emotion to the correct causes appear to be instrumental in creating a communicative atmosphere that is conducive to relational satisfaction.

For both men and women, being able to decode negative affect may be a stepping stone toward providing effective emotional support for a distressed partner. Burleson (2003) defined emotional support as "specific lines of communicative behavior enacted by one party with the intent of helping another cope effectively with emotional distress" (p. 557). Furthermore, Burleson contended that being able to provide sensitive emotional support is a "relationally significant" behavior (p. 555). Such behavior helps people develop, maintain, and repair close relationships. In fact, scholars have cast emotional supportiveness as a key relational maintenance behavior (Haas, 2002; Haas & Stafford, 1998; Messman, Canary, & Hause, 2000). People who are skilled in providing emotional support are also more popular, likable, and socially attractive than people who do not possess such skill (see Burleson, 2003, for a review).

Although verbal communication plays a critical role in determining the quality of emotional support (Burleson, 2003; Burleson & Goldsmith, 1998),



nonverbal communication is equally as important. Burleson (2003) noted that “nonverbal support precedes verbal forms both phylogenetically and ontogenetically; one has only to look at mammal mothers interacting with their infants to be convinced of this” (p. 553). Indeed, people with emotional support skills have likely been regarded as valuable members of groups and communities across the millennia.

Of all the nonverbal cues, touch appears to be the most important channel for expressing comfort and emotional support. In a study by Dolin and Booth-Butterfield (1993), students were asked to describe the various ways they would comfort a roommate who was going through a romantic relationship breakup. The vast majority of students reported that they would engage in some form of tactile contact. Nearly 42% of respondents wrote that they would give the roommate a hug, while nearly 41% wrote that they would move physically closer to the roommate by leaning closer or sitting down next to her or him. Patting the roommate’s arm or shoulder was reported by around 27% of the students. Less commonly reported types of comforting touch included stroking the roommate’s hair or letting the roommate put her or his head on their shoulders. A study on general patterns of tactile behavior by Jones and Yarbrough (1985), which involved having people keep logs of the types of touch they encountered during everyday interactions, produced complementary results. The most common types of touches used to comfort others involved patting or touching someone’s arm, shoulder, or hand. Hugs tended to be used when comforting people who were extremely distressed. Thus, in distressful situations such as comforting someone who is undergoing a relationship breakup, hugs may be more likely than in situations where a person is experiencing milder forms of distress.

Several other nonverbal cues are related to comforting. In Dolin and Booth-Butterfield’s (1993) study, nearly 39% of respondents reported that they would use facial expressions, such as looking empathetic, sad, or concerned, to show emotional support. A similar number of respondents (37.7%) wrote that they would increase attentiveness by engaging in behaviors such as listening carefully and nodding as the person talked about the distressing event. Some students (23.7%) also mentioned that they would use increased eye contact, especially when the distressed roommate was talking. Other less commonly reported nonverbal behaviors included crying with the roommate, lending the roommate a shoulder to cry on, and using warm vocal tones. In an experimental study, Jones and Guerrero (2001) verified that distressed participants who received high levels of nonverbal immediacy (operationalized in terms of behaviors such as close distancing, forward lean, increased eye contact, attentiveness, and vocal warmth) rated the confederate’s comforting behavior as more effective than did participants who interacted with confederates who engaged in moderate or low levels of non-



verbal immediacy. Moderate levels of nonverbal immediacy were also rated as more effective than low levels of nonverbal immediacy.

## Managing Emotional Expression

Whether one is expressing emotion or trying to comfort a distressed relational partner, there are times when it is appropriate and effective to manage (or regulate) emotional displays. Indeed, scholars have defined emotional expression in terms of both spontaneous and strategic communication (e.g., Planalp, 1999). Researchers have identified five specific ways that people manage emotional expressions (Ekman & Friesen, 1975; Saarni, 1985, 1993). First, *intensification*, or maximization, involves exaggerating one's emotions. The key here is that people actually are experiencing the emotion they are showing, but they are acting as if they feel the emotion more intensely than they actually do (e.g., Tina is pleased that David bought her a nice birthday present, but she acts even happier than she actually is). Second, *de-intensification*, or minimization, involves the opposite process. In this case, a person downplays the intensity of emotion. So if David gets so angry that he feels like slamming the door when retreating into the master bedroom, he might curb his display of anger by closing the door purposely but not slamming it. Because intensification and de-intensification involve modifying the expression of an emotion that a person is actually feeling, children are likely to master these two display rules first (Saarni, 1993).

The other three display rules are more difficult to learn because they entail communicating an emotion, or a lack of emotion, that a person does not actually feel. *Simulation* involves acting like one feels an emotion when one actually feels nothing (e.g., Tina does not really care that David's friend received a big promotion, but she acts happy for him). *Inhibition* involves the opposite process—acting like one is indifferent or emotionless when one is actually experiencing emotion. For instance, if David is flirting with someone at a party, Tina might act like it doesn't bother her in order to save face in front of her friends. Finally, *masking* or substitution occurs when a person covers up a felt emotion with a completely different emotion (e.g., Tina is upset that David wants to spend the weekend with his friends, but she smiles and tells him to have a good time).

Research on display rules suggests that people manage emotions differently depending on the stage of the relationship. During the early stages of courtship, people may be more likely to perceive expressions of negative emotion as inappropriate, and, therefore, to inhibit such expressions (Aune, Aune, & Buller, 1994; Aune, Buller, & Aune, 1996). This is because people are typically more concerned about making positive impressions in early rather than later stages of relationships, leading them to put on a happy face even when they are feeling down or angry (Metts & Bower,

1994). Once the relationship is developed, relational partners may feel freer to express negative emotion. In line with this reasoning, in one of two studies conducted by Aune et al. (1996), partners in early dating relationships were shown to manage negative emotions more than partners in developed relationships. In a second study presented by Aune et al. (1996), a curvilinear pattern was found for the effect of relationship stage on the management of emotion; partners reported managing negative emotions more when they were in early or advanced stages of relationships rather than in middle stages. Perhaps, then, couples learn to manage negative emotion more as their relationship becomes stable. At the same time, however, people tend to rate the expression of both positive and negative emotions as increasingly appropriate as relationships develop (Aune et al., 1996). Taken together, these results suggest that although partners in stable relationships may feel freer than those in early dating relationships to express their true emotions, they may also manage some negative emotions (perhaps as a way of maintaining the relationship). Alternatively, research suggests that negative emotions are experienced and expressed more often in the middle stages of a relationship than in early or stable relationships (Aune et al., 1994), suggesting that there may be less need to manage negative emotional expression in long-term relationships.

Deintensifying emotional expression may be beneficial within relationships in some instances but not others. Feeney et al. (1998) found that people were more satisfied with their relationships when their partners controlled their expressions of anger. However, the opposite finding emerged for sadness—people reported more satisfaction when their partners expressed rather than inhibited sad feelings. As noted earlier, although it is not advisable to bottle up negative feelings all the time, learning to express emotions such as anger through assertive rather than aggressive means can be advantageous when trying to solve relational problems. Being able to display negative, yet nonhostile emotions, such as sadness, in an effective and appropriate manner may be instrumental in eliciting social support.

## SUMMARY

Emotions are interwoven into the fabric of people's relationships. Indeed, the experience and expression of emotion gives relationships color and texture. Emotions arise in reaction to events that interrupt, impede, or enhance one's goals. The experience of emotion includes affective valence, physiological changes, and cognitive appraisal. The expression of emotion is influenced by innate action tendencies as well as socially learned display rules. A wide array of emotions—ranging from affectionate to sad or anxious

to hostile—are expressed within interpersonal interaction. Nonverbal behavior provides the primary avenue for communicating emotion. People typically express emotions using multiple nonverbal channels, with vocal, facial, and bodily cues often playing predominant roles.

Research has also demonstrated that nonverbal skills in encoding, decoding, and managing emotional expression may help people develop and maintain their relationships. Expressing positive affect is an important relational maintenance behavior. Moreover, being able to express negative affect in assertive rather than aggressive or passive ways appears to be associated with relational satisfaction. Decoding skills are also critical to relational functioning. Partners who decode one another's neutral expressions as negative have more interpersonal problems, partially because they tend to reciprocate the partner's supposed negative affect. Thus, it is crucial for relational partners to decode positive and neutral emotions accurately. It may be equally important to attribute the causes of emotion properly. Couples who accurately attribute positive affect to relational causes and negative affect to external causes may be happier. People who are good decoders also appear to be better at providing emotional support. Finally, being able to manage one's emotional expressions so that communication is effective and appropriate is a key nonverbal skill. For instance, curbing anger or simulating empathy may be beneficial in certain circumstances. Skills such as these may go a long way in helping people develop and maintain close, satisfying relationships.

## Nonverbal Correlates of Power and Interpersonal Dominance

*After getting over their first big fight, David and Tina decided it would be good for them to get away for a while, and they started planning a vacation together. They both schedule a week off work and then sit down together to assess their resources and decide where to go. Tina has nearly \$2,500 to contribute to the vacation fund, while David has a little over \$1000. Tina saw an advertisement for a package deal on a 5-night stay in Kauai. She has been to Oahu, Maui, and the big island of Hawaii, and she loved them all, but she has never been to Kauai so she really wants to go. David, however, isn't really into the beach scene and would rather go to Grand Canyon for a week. Both try to convince the other that their vacation plan is best. Tina smiles and touches David's arm, telling him how romantic a tropical island would be. Then she starts to describe the Hawaiian Islands while still touching his arm. David stands up and interrupts her, asking her to consider going to the Grand Canyon since it would cost less, she has never been there before, and it is, after all, one of the seven world wonders. As they discuss these possibilities, David feels that he is in a less powerful position because he is contributing less money, so he tries to compensate by acting especially assertive.*

As the interaction between Tina and David illustrates, dominance and power are features that define particular interactions as well as “the very nature of interpersonal relationships” (Burgoon, Johnson, & Koch, 1998, p. 308). Indeed, many scholars have labeled dominance–submission or power as one of the most fundamental dimensions underlying all types of relationships and interactions (e.g., Burgoon & Hale, 1987, 1988; McDonald, 1980; Rollins & Bahr, 1976). Although power and dominance are often communi-

cated through verbal communication (e.g., Rogers & Farace, 1975; Rogers & Millar, 1988), nonverbal cues are also instrumental. In this chapter, we begin by defining the related constructs of power, dominance, and status, followed by a discussion of relative power within relationships. Next, we outline the correlates of power by focusing on principles related to space and privacy, centrality and visual dominance, elevation, prerogative, and interactional control. We also examine power as a construct that helps explain certain sex differences in nonverbal communication. The chapter ends with a review of behaviors related to interpersonal dominance—first by focusing on dominance through socially skilled behavior, and then by focusing on dominance through intimidation or threat.

## DEFINING POWER, DOMINANCE, AND STATUS

### Power

Although the terms dominance and power are sometimes used interchangeably in the literature, power is generally regarded as the broader term (Burgoon, Johnson et al., 1998). Power is typically defined as having the ability and potential to influence others as well as to resist the persuasive attempts of others (Berger, 1994; Burgoon, Johnson et al., 1998; Coats & Feldman, 1996). Dominance is one route by which people gain or exert power (Burgoon, Johnson et al., 1998). Viewed this way, power can be conceptualized as an outcome or perception that arises from “actual or implied authority, expertise, capacity to bestow rewards, capacity to withhold or apply punishments, persuasive abilities, or possession of interpersonal qualities with which others may identify,” whereas dominance can be thought of as a method or set of behaviors (Burgoon & Baccus, 2003, p. 200). Indeed, scholars have described various tactics that lead to power, including threatening someone, hinting, bargaining, enacting violence, persuading someone, being ingratiating, and promising rewards (Buss, Gomes, Higgins, & Lauterback, 1987; Falbo & Peplau, 1980; Fitzpatrick & Badzinski, 1985; Miller & Boster, 1988).

In their seminal work, French and Raven (1959) identified five power bases: reward, coercive, legitimate, expert, and referent. People with reward power have the ability to give others desired resources, whereas people with coercive power have the ability to punish others. Those with legitimate power are perceived to have the right or authority to influence others, often because of position or status. Expert power is related to a person’s specialized knowledge. Finally, referent power is related to how likable and dynamic a person is. An individual can possess one or more of these power bases.

Intuitively, it makes sense that people would use different types of dominant behavior depending on the power base(s) they possess. For example, Burgoon (1994) suggested that people with referent power (including those in close relationships) may use more ingratiating strategies, including nonverbal cues such as smiling and vocal warmth. In contrast, it seems logical to speculate that people with coercive power would use more intimidating behaviors, such as a lowered brow and nonsmiling face, both of which have been shown to be associated with dominance (e.g., Keating, Mazur, & Segall, 1977). In contrast, people with other forms of power may be more likely to have relaxed or smiling faces, as demonstrated by Aguinis, Simonsen, and Pierce (1998). Aguinis and colleagues had participants read descriptions of an interaction between two people (which included references to some of their nonverbal behaviors) and then judge how much power each of the interactants had. Participants rated the men in the vignettes higher in referent, reward, legitimate, and expert power (but not coercive power) when they were described as using relaxed facial expressions.

Power can also be expressed in a variety of ways. Scholars have made an important distinction between manifest and latent power (Huston, 1983, Komter, 1989). Latent power is expressed covertly when people anticipate the needs and reactions of powerful partners and adjust their behavior accordingly. Manifest power, on the other hand, is expressed directly, through such means as making a request or threatening a partner. Scholars have also distinguished between direct and indirect means of exerting power. Direct strategies are overt attempts to persuade or influence the partner, while indirect strategies are more subtle and sometimes manipulative. Nonverbal cues are likely to accompany both direct and indirect power moves, although they may be more common with indirect tactics. For instance, if David is worried that Tina will react angrily when she finds out that he bounced a check from their new joint account, he might use nonverbal behaviors such as smiling, positive forms of touch, and vocal warmth to try and soften her up (an indirect strategy) before telling her the news. Or he might tell Tina, in a firm voice, "I've never bounced a check in my life until now so I don't want you to make a big deal out of this" (a direct strategy). Steil and Weltman (1991) demonstrated that although men and women are more similar than different in their use of power tactics, women are somewhat more likely than men to use indirect forms of influence.

### **Interpersonal Dominance**

One way to gain power, either directly or indirectly, is to utilize dominant behavior. In line with Burgoon, Johnson et al. (1998), we conceptualize interpersonal dominance as "a relational, behavioral, and interactional state that reflects the actual achievement of influence or control over another via

communicative actions” (p. 315). To exercise such influence, people can engage in dominant behavior that reflects either social skill or intimidation. Indeed, while some scholars have defined dominant behavior in terms of threat or “force and coercion” (e.g., Aguinis, et al., 1998, p. 458), others have conceptualized dominance in terms of socially skilled behavior that reflects assertiveness, self-confidence, and dynamism (Burgoon & Dunbar, 2000). In either case, dominant behavior is used to accomplish goals and influence others. Research suggests that enduring, internalized influence is facilitated more by dominance enacted through social skill than dominance enacted through coercion or threat (Burgoon, 1994). Thus, in the context of close relationships, dominance via socially skilled behavior is likely to be associated with better individual and relational outcomes, such as long-term influence and relational satisfaction, than is dominance via intimidation or threat.

Burgoon, Johnson et al. (1998) also differentiated interpersonal dominance (which is located in communication) from psychological dominance (which is located in personality traits). Further, they argued that interpersonal dominance only occurs when submission takes place. As Burgoon, Johnson et al. (1998) put it, “For one person to be considered dominant, there must be at least one other who is not. Without the presence of other interactants, dominance does not exist” (p. 315). So, Tina might enact a bid for dominance by hinting that David get her a blanket (perhaps by saying she is cold and then rubbing her hands together), but unless David complies Tina is not dominant.

Scholars have also distinguished between dominant behaviors or episodes and overall patterns of dominance in relationships. A single exchange between a husband and wife, for example, might show that one spouse was successful in influencing the other on a specific occasion, but a spouse only has a truly dominant position in a relationship if he or she makes decisions or wields more influence than the partner consistently on a wide array of issues (Huston, 1983). When this happens, one partner has more interpersonal control. In many (if not most) relationships, however, both partners exercise dominance at various times on different issues, with the relationship being fairly equalitarian overall.

### **Status or Position**

Whereas dominance is the display or expression of power through behavior, status is one’s position within an organizational or social hierarchy. Status is often achieved through dominant communication, and people with high status are freer to engage in dominant behavior and are more likely to be perceived as powerful. However, status is distinctly different from power and dominance. For instance, some people have high status even though they do not use dominant behavior (e.g., David’s boss holds a high position

because of the advanced, specialized knowledge she has, but she does not use a dominant communication style). Other people hold positions of high status, but their so-called subordinates do not respect their knowledge, leading to less power (e.g., Tina's boss is a figurehead who has power when it comes to giving rewards or punishments, but he has little expert knowledge). Within people's relational networks, some individuals have more social status than others. Coats and Feldman (1996) defined social status as "the prestige an individual has within the group; it is related to popularity" (p. 1014). People with high status tend to have more referent power and perhaps more reward or coercive power, but they do not necessarily have more authority or expertise.

Another form of status or position involves the discrepancy between the degree to which two people care about one another. When two people love one another equally, there is no inherent power differential. However, as Waller first noted in 1938, a principle of least interest is operative in situations where one person cares more than the other. This principle can be applied to negotiations between businesspeople or national representatives, as well as to interpersonal interaction. In relationships, the principle of least interest means that the person who is more emotionally involved has less power because he or she has more to lose. In line with this principle, Safilios-Rothschild (1976) found that wives perceived themselves to have more decision-making power when they thought their husbands loved them more than they loved their husbands. Caldwell and Peplau (1984) found the principle of least interest to extend to lesbian relationships, with the less emotionally involved partner reporting more power. In heterosexual relationships, Sprecher and Felmlee (1997) also found that the person who was less emotionally involved had more power—whether that person was a man or a woman—but men were usually less emotionally involved. Thus, Sprecher and Felmlee argued that the principle of least interest may help explain why men tend to use certain power cues more than women.

## **RELATIVE POWER AND DOMINANT COMMUNICATION IN RELATIONSHIPS**

Scholars have also theorized about the association between relative power and dominant behavior within the context of close relationships. Using Rollins and Bahr's (1976) work as a theoretical launching pad, Dunbar (2003, 2004; Dunbar & Burgoon, 2005) developed dyadic power theory to explain the power–dominance link within romantic and family relationships. Within the theory, relative power refers to a person's position of power in relation to the dyadic partner. A person can be more powerful, less powerful, or fairly equal in power compared to the partner. A person's perception of her or his



relative power is theorized to affect choices regarding whether to use dominant behavior as well as which specific behaviors will likely be effective.

Felmlee's work suggests that within heterosexual romantic relationships, most partners report some level of power imbalance, with men more likely to be perceived as having more power than women (Felmlee, 1994; Sprecher & Felmlee, 1997). Interestingly, Gray-Little and Burks (1983) reported that people tend to be less satisfied with their relationships when the woman is perceived as more powerful, and most satisfied when partners are perceived to be equal in power. Felmlee (1994) found a somewhat different pattern; people reported more relational stability (or less likelihood of breakup) when the man was more powerful, rather than when partners were equal in power. Schell and Weisfeld (1999) found that couples were most satisfied with their interaction during a decision-making task when the man exhibited dominant behavior. Together, these studies suggest that although power balanced relationships are often the most advantageous, a power balance favoring the male may not be as detrimental to a relationship as a power balance favoring the female. Indeed, some research even suggests that husbands with dominant wives are more likely to engage in violent behavior, presumably as an attempt to counterbalance her power (Babcock, Waltz, Jacobson, & Gottman, 1993). We suspect, however, that if power balances become large enough, they will have negative consequences for relationships even if men are perceived as the more powerful partner. As Dunbar and Burgoon's (2005) research suggests, although most partners do not have exactly the same amount of power, differences in relative power are typically small in romantic relationships.

Even subtle differences in power, however, may impact the nonverbal expression of dominance. Originally, Rollins and Bahr (1976) predicted that people who perceive themselves to have more relative power are likely to use more dominant behavior. Nearly a decade later, results from a study by Kollock, Blumstein, and Schwartz (1985) supported this prediction by showing that the more powerful individual within a romantic relationship talks and interrupts more than the less powerful individual. Kollock and colleagues also demonstrated that talk time and interruptions were similar for partners in relationships characterized by equal power. These findings generalized across both straight and gay relationships. Similarly, studies have shown that regardless of sexual orientation, the partner with higher relative power is more likely to use influence strategies such as coercion, verbal persuasion, and bargaining. In contrast, the partner with lower relative power is more likely to use influence strategies such as ingratiation, manipulation, withdrawing, and negative affect expression (Howard, Blumstein, & Schwartz, 1986; Falbo & Peplau, 1980).

More recently, Dunbar and Burgoon (2005) predicted a curvilinear relationship between relative power and dominant communication, such that

dyadic partners equal in power were theorized to display more dominance than those who were in a more or less powerful position. According to this perspective, people who perceive themselves to be high in relative power do not feel they need to use as much dominant behavior to exert influence because they are confident in their positions and are likely to exert latent power. In contrast, people who perceive themselves as low in relative power are theorized to accommodate rather than risking potential relational problems by challenging the powerful partner (Dunbar, 2003; Dunbar & Burgoon, 2005). A study by Felmler (1994) supports this reasoning by showing that people in equalitarian relationships tend to use more dominant behavior than those in less equal relationships. However, another study by Aida and Falbo (1991) obtained the opposite finding. People in egalitarian marriages used less dominant communication than partners in traditional marriages, where men had more relative power.

Given these contradictory findings, perhaps it is not surprising that Dunbar's work testing the curvilinear hypothesis has produced mixed results thus far. In a study of married and cohabiting couples, Dunbar and Burgoon (2005) concluded that those who perceive themselves to be slightly more or less powerful than their partners use more dominant behavior than those who perceive themselves to be quite a bit more or less powerful than their partners. In terms of specific nonverbal patterns, they found that people who perceived themselves as powerful tended to be rated as the most facially pleasant and the least controlled in their body actions, and to be perceived by their partners as showing relatively low levels of dominant behavior. Thus, consistent with their theorizing, people who perceived themselves as relatively high in power appeared pleasant and relaxed rather than displaying overtly dominant behavior. However, people who perceived themselves as relatively low in power tended to interrupt more and use more illustrator gestures. This second finding is inconsistent with the curvilinear prediction inasmuch as those with relatively low levels of power used interruptions and illustrator gestures to try to persuade rather than accommodate the more powerful partner.

In a second experimental study, Dunbar (2003) manipulated relative power using a bargaining role-play method that involved having undergraduate students assume roles that vary in terms of authority and control of resources. Individuals who played the role of a low power person (e.g., they had little authority and control of resources) were perceived by their partners as using the most dominant behavior, followed by those highest in power. Those equal in power were perceived by one another to use less dominant behavior. This pattern is quite different than the curvilinear effect predicted by dyadic power theory (Dunbar & Burgoon, 2005). Dunbar (2003) suggested that these findings may be specific to role-playing situations which involve strangers or acquaintances rather than relational part-

ners. In such situations, Dunbar argued that less powerful people would feel freer to engage in dominant behaviors because they would be less fearful of repercussions than they would if interacting with a powerful relational partner. People in the more powerful position may also be more likely to use dominant behavior with strangers because they cannot rely on latent power to the same extent as they can when interacting with relational partners. Of course, a reciprocity effect may also be operative, with powerful individuals reacting to the dominance bids of less powerful individuals.

When considered together, these studies suggest that the association between power and dominance is nuanced and complex, and that more work is needed to determine how relationship type moderates this association. Dunbar's studies clearly demonstrate that power and dominant behavior do not always go hand-in-hand. In fact, there may be situations where the more powerful relational partner uses less overtly dominant behavior than the less powerful partner. Of course, as noted earlier, dominance is only achieved when one person is influenced by the other, so although people who perceive themselves to have somewhat less power may use communication in an attempt to gain influence, these dominance bids may not reflect actual interpersonal dominance. For example, Frieze and McHugh (1992) showed that women married to violent husbands used more influence attempts in their relationships than did women married to nonviolent husbands; however, women with violent husbands still had less decision-making power. Dunbar and Burgoon's (2005) findings also hint that partners who are relatively high or low in power may use different types of dominant behavior. Those who perceive themselves as high in power may be more likely to smile, show facial pleasantness, and have relaxed body positions. The partner in the power position can afford to use such behaviors, which may add to her or his power by enhancing perceptions of poise and dynamism. Because people may not typically perceive behaviors related to pleasantness and relaxation as dominance attempts, this may make them even more effective. In contrast, partners who perceive themselves as less powerful may use more overtly controlling behavior, such as interruptions, to try to gain a more dominant position.

## **NONVERBAL CORRELATES OF POWER**

As Dunbar's research suggests, a variety of nonverbal cues correlate with power and dominance (see Table 6.1 for an overview). Much of the research on the nonverbal correlates of power has focused on differences between men's and women's behavior (e.g., Henley, 1977, 1995) or on communication within organizations or groups (e.g., Andersen & Bowman, 1999; Remland, 1981, 1982). In this section, we discuss nonverbal behaviors that

TABLE 6.1  
Nonverbal Cues Related to Power and Dominance

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*Power*

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Larger, more private spaces  
 Central positioning  
 Receiving more eye contact and attention  
 Visual dominance (looking at others more when speaking than listening)  
 Height, elevated positions and spaces  
 Prerogative to violate expectations related to haptics, chronemics, and dress  
 Prerogative to control interaction through extended talk time, interruptions, and leave-taking

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*Dominance Through Social Skill*

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*Influence*

Direct gaze  
 Positive forms of touch  
 Close distances  
 Professional/nice appearance  
 Kinesic and vocalic expressiveness  
 Kinesic and vocalic pleasantness

*Poise and Self-Assurance*

Asymmetrical leg and arm positions  
 Sideways leaning  
 Open arms and body position  
 Kinesic expressiveness  
 Low amount of swiveling, adaptors, and random movement  
 Fluent speech  
 Facial pleasantness/smiling  
 Eye contact  
 Moderately fast and loud voice  
 Increased talk time

*Conversational Control*

Attention-getting techniques (e.g., demure eye contact, bumping into someone)  
 Fluent speech with unsmooth turn-switching and interruptions  
 Backchannelling and nodding  
 Increased talk time  
 Eye contact (especially when speaking)  
 Rejection and leave-taking behaviors (e.g., ignoring someone, increasing distance)

*Panache or Dynamism*

Close distancing  
 Gaze and direct body orientation  
 Forward lean  
 Vocal and kinesic expressiveness  
 Faster, louder speech

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*(Continued)*

TABLE 6.1  
(Continued)

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*Dominance Through Intimidation/Threat*

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Direct stare
Rolling eyes
Steady gaze (not breaking eye contact first)
Loud voice
Silence/silent treatment
Spatial violations
Chronemic violations and regulation of activity
Obsessive relational intrusion behaviors (e.g., property damage, unwanted notes)
Violence

---

are generally thought to correlate with perceptions of power. Although many of the studies examining nonverbal power come from an organizational perspective, the principles derived from this literature have implications for close relationships. After reviewing these principles, we turn to a discussion of sex differences in power displays.

### **The Principle of Space and Privacy**

Powerful people are given access to more space and larger, more private territories (Dean, Willis, & Hewitt, 1975; Henley, 1995; Remland, 1981; Sundstrom & Altman, 1976), and they also have more control of their personal space (Henley, 2001). In organizations, powerful individuals have the largest and most private offices. In fact, they are often separated from other employees by multiple doors as well as a secretary who acts as a gatekeeper (Andersen & Bowman, 1999). The principle of space also relates to the way rooms are used and artifacts are placed within a household. Relational partners who live together sometimes have power struggles over space and privacy. Indeed, deciding who gets the largest closet and whose preferred artwork hangs in the family room are not only sources of conflict for many couples, but can also be manifestations of an underlying power struggle. People use a variety of nonverbal cues to help them create and maintain privacy, including manipulating the environment (e.g., closing a door), reducing eye contact, increasing conversational distance, and looking disinterested. When people notice and respect these sometimes subtle cues, they are showing respect and possibly deference to someone.

### **The Principle of Centrality and Visual Dominance**

Powerful people also occupy more central positions, such as the head of a table, where visual access to a group is maximized (Sommer, 1971; Strodtbeck & Hook, 1961). Perhaps in part because they are located in central po-

sitions, powerful people receive more eye contact than others in a group, especially when they are speaking. This relates to Exline, Ellyson, and Long's (1975) *visual dominance ratio*. According to Exline and colleagues, powerful people look more at others when speaking than when listening. Conversely, submissive individuals look more when they are listening (as a sign of attention and respect) than when they are speaking. Through central positioning at a table or in a room, powerful individuals can maximize the amount of control they have. They can look around to ensure that everyone is listening when they are speaking, and they can regulate conversation more easily. The visual dominance ratio may also play an important role within interpersonal interaction. In one study, Schell and Weisfeld (1999) found that couples were more satisfied following a decision-making task when the husband used high levels of visual dominance. In this study, the actual outcome of the process did not seem to be as important as the nonverbal cues that accompanied the process. In another study, Dunbar and Burgoon (2005) demonstrated that visual dominance was correlated with ratings of dominance for both men and women.

### **The Principle of Elevation**

Just as placement and position can convey power, so too can height or vertical space. This principle is readily observable in business, legal, and educational settings. Presidents of corporations often have offices on the top floor of high-rise buildings, judges often sit on benches that rise above courtrooms, and professors often stand to lecture while their students are seated. Behaviors that increase height differentials can also convey power. For example, powerful people are sometimes described as "standing tall" or "standing head-and-shoulders above the crowd." Standing over an individual and looking down at her or him is generally regarded as a power move (Henley, 1977; Remland, 1982), so in the scenario at the beginning of this chapter, it is likely that Tina would interpret David's switch to standing position as a dominance move. In fact, Schwartz, Tesser, and Powell (1982) found that elevation accounted for nearly two thirds of the variance in dominance ratings of people in pictures; people who were standing were rated as more dominant than those who were sitting. It follows then that tall people would be seen as more powerful than short people (Henley, 1977). Men, in particular, seem to be regarded more favorably and as more dominant when they are tall (Roberts & Herman, 1986). Mehrabrian (1972) argued that height and strength evolved as valued qualities in friends as well as mates, because such characteristics gave people a survival advantage. Indeed, heterosexual women tend to be attracted to stronger, taller, and more dominant men (Jackson & Ervin, 1992; Sadalla, Kenrick & Vershure, 1987; Pierce,

1996), which gives taller men an advantage over their shorter, less dominant-looking counterparts in the dating marketplace.

### **The Principle of Prerogative**

When an individual is a subordinate in an organization or in the beginning stages of a relationship, it is advisable to use nonverbal communication that conforms to social norms. However, as people obtain higher positions in organizations or become closer relational partners, they have more of a prerogative to break the norms and engage in more powerful or more idiosyncratic behavior. For instance, powerful individuals are more likely to initiate touch, show up late, dress informally, and interrupt others (Henley, 2001). Moreover, powerful individuals, unlike subordinates, can engage in these behaviors without censure. A subordinate who is interacting with a powerful person is likely to exhibit formal, polite, and possibly tense behavior (Henley, 2001), as well as to have to wait for the powerful person's arrival. Within relationships, partners gain a certain degree of power and freedom over time; they do not need to dress up for each other as much or worry if they are a few minutes late for a date once the relationship has become committed. However, the more powerful relational partner, who might well be less emotionally involved, is likely to break rules and norms more frequently (Huston, 1983). He or she might forget to call the partner back, arrive very late for an important date, or interrupt the partner frequently during a conflict episode. As Huston (1983) suggested, the person in the less powerful position is usually careful not to offend the more powerful person. This may lead to a chilling effect, with the less powerful person hesitant to discuss relational problems or assert her or himself (Dunbar, 2003; see also Cloven & Roloff, 1993; Roloff & Cloven, 1990).

### **The Principle of Interactional Control**

Related to the idea of having the prerogative to break social norms by engaging in behaviors such as interrupting others, powerful people have the ability to control interaction. As Cappella (1985) said, "Power can be achieved in deliberative contexts by controlling one's own and others' ability to present information" (p. 70). Powerful people often control the conversational floor by initiating and changing topics (Wiemann, 1985), as well as talking and interrupting more (Brandt, 1980; Dunbar & Burgoon, *in press*; Kollock et al., 1985; Lamb, 1981; Leffler, Gillespie, & Conaty, 1982). In turn, people who use these behaviors are rated as more dominant or as better leaders (Kleinke, Lenga, Tully, Meeker, & Staneski, 1976; Sorrentino & Boutillier, 1975; Stang, 1973), unless they hold the floor so much that people see them as overly controlling (Daly, McCroskey, & Richmond, 1977). Re-

search on group interaction suggests that people who speak more than 60% of the time tend to be viewed as overbearing rather than as exerting an appropriate level of power (Cappella, 1985). However, to our knowledge there has not been a similar estimate for appropriate talk time in dyadic contexts. We would imagine, however, that there is a fine line between managing the floor appropriately and being perceived as too controlling.

## SEX DIFFERENCES IN POWER CUES

Since the 1970s, scholars have used a power or dominance framework to explain sex differences in nonverbal communication. In her famous book, *Body Politics*, Henley (1977) proposed that women's nonverbal behavior is characterized by submissiveness, whereas men's nonverbal behavior is characterized by dominance (see also Henley, 1995, 2001). Thus, sex differences in nonverbal communication reflect a power dimension, with behavior between men and women paralleling that between superiors and subordinates. According to this perspective, women are also more likely to be nonverbally sensitive because having less social power necessitates developing survival skills related to listening and becoming affiliated with others (LaFrance & Henley, 1994; Henley & Kramarae, 1991). Other scholars have attributed sex differences in communication, including nonverbal behavior, to power. For example, in a commentary based on debate between Julia Wood and Kathryn Dindia (1998), Wood remarked that "Many, if not most, differences between the sexes reflect women's and men's unequal social power and the disparate behavior and attitudinal tendencies their respective degrees of power promote" (p. 21). Henley's theoretical position, which has been labeled the subordination hypothesis, is supported by empirical studies showing that men talk more often and in louder voices (e.g., Kimble & Musgrove, 1988), display more visual dominance, interrupt more, and initiate touch more often than women (see Burgoon, 1994; Henley, 1977, 1995). Studies have also shown that women smile more (Hall, 1984, 1998), are more facially and vocally expressive, let people move closer to them, and take up less physical space than men (Burgoon, 1994; Henley, 1977, 1995).

Of course, the behaviors listed above are not always interpreted as dominant or submissive. Burgoon (1994) argued that some behaviors labeled submissive, such as smiling and vocal expressiveness, may reflect friendliness or even dynamism more than submission (see also Hall, 1998). Burgoon and her colleagues have also shown that expressive, friendly behaviors are influential and may represent a form of socially skilled dominant behavior (e.g., Burgoon & Bacue, 2003). Because women are sometimes perceived to have more referent power than men (Carli, 1999), using friendly, expressive nonverbal behavior may actually be an effective strategy when



women seek to gain power and influence others. In contrast, because men are often perceived as having more expert and legitimate power than women (Carli, 1999), dominant behaviors such as interruptions and increased talk time might be more effective and appropriate for males. Indeed, Carli found that men were more successful than women when they used influence strategies based on competence or authority. Women also use more indirect, unilateral techniques such as being ingratiating or charming to gain compliance, whereas men tend to use more direct techniques (Falbo & Peplau, 1980), as illustrated by David and Tina at the beginning of this chapter. Imagine, however, if David was the one who used smiling and touch while Tina stood up and interrupted him. Could these behavioral displays be effective? Research by Dunbar and Burgoon (2005) suggests that behaviors which contradict gender stereotypes are sometimes perceived as dominant. Specifically, they found that men were rated as more dominant when they were facially pleasant and expressive, whereas women were rated as more dominant when they were less facially pleasant and expressive.

Because men and women use different power bases and influence strategies, the subordination hypothesis may not capture all the nuances involved in a dyadic struggle for power. Like Burgoon (1994), others have questioned the comprehensiveness of the subordination hypothesis explanation for sex differences by charging that so-called dominant or submissive nonverbal behaviors can be interpreted differently depending on the context. For example, Halberstadt and Saitta (1987) found that smiling was interpreted in a variety of ways, including as a friendly or submissive expression, whereas head canting (i.e., tilting the head to one side) was actually interpreted as dominant rather than submissive as previously thought. Halberstadt and Saitta also demonstrated that sex differences in certain submissive behaviors are small. In their study of over 1,200 people in natural settings such as shopping malls, parks, and airports, they found that men and women were more similar than different when it came to displaying nonverbal signs of submission (e.g., smiling, head cants, and posing with weight shifted to one side). Other scholars have criticized Henley's subordination hypothesis by showing that personality (e.g., Tucker & Friedman, 1993) is a better predictor of individual differences in nonverbal behavior than sex or by arguing that equating power and gender is an overly simplistic explanation for sex differences in nonverbal behavior (Hall & Halberstadt, 1997).

In addition, although empirical evidence suggests that power may indeed underlie some sex differences in nonverbal behavior, the inconsistency found across studies suggests that power only provides a partial explanation. For example, empirical support for sex differences in dominant behaviors related to interactional control is mixed. In an analysis of conver-

sations between heterosexual couples, Fishman (1978) found that men talked more and were more in control of the topics that couples discussed compared to women. In contrast, women used more vocal backchannelling (such as saying “uh-huh”) and asked more questions that were of interest to their partners. Other researchers have also shown that men talk more than women (e.g., Kimble & Musgrove, 1988; Woods, 1988). However, DeFrancisco (1990, 1991) found that women talked more than men and that there were no sex differences in backchannelling. In contrast to previous studies, Robey, Canary, and Burggraf (1998) found no significant differences between husbands and wives in talk time, but found husbands use significantly more backchannelling than wives. Research on interruptions has been similarly inconsistent, with some studies showing men to interrupt more than women (e.g., Hall, 1984; Woods, 1988), and other studies showing no difference (e.g., Dindia, 1987), even when the type of interruption (confirming, disconfirming, or rejecting) was considered (Robey et al., 1998).

To help explain this inconsistency, scholars have pointed out that sex differences in dominant communication are less likely when people have equal status or are in equalitarian relationships. Moreover, sex differences may vanish or reverse when a woman is in a more powerful position than a man. This reasoning suggests that power, status, or social role are better predictors of individual differences in dominant communication than sex or gender. This logic is reflected in social role theory (Eagley, 1983; 1987; Eagley & Wood, 1982), which helps explain sex differences that are based on traditional power differentials between men and women within a given culture, and also explains why exceptions to the pattern of male dominance occur.

According to social role theory, men and women are socialized to fulfill different social roles, and thus are expected to possess and hone communication skills that help them fulfill those goals (e.g., Eagley, 1983). Boys are taught to be more agentic and instrumental. They are also assigned to higher status roles and are expected to be more competent than women in arenas requiring competence and expertise. Girls, on the other hand, are taught to be more affiliative and expressive, and are expected to be more nurturing and relationally oriented (e.g., Brody, 1985; Eagley, 1983). According to social role theory, these norms and expectations create self-fulfilling prophecies, with men learning to be more dominant than women. Of course, as gender roles change, so too will the expectations and communication patterns change in differentiating the sexes. Social role theory privileges status or position over gender when predicting individual differences in dominant behavior. Thus, if a woman is in a more powerful position, she would be likely to exhibit more dominant communication than a man in a lower position (although men would still be predicted to display more dominance when interacting with a woman of equal power due to differential socialization).

A series of studies by Sagrestano and her colleagues tested the proposition that status or power is more closely related to dominance than gender. In the first of these studies (Sagrestano, 1992), people imagined themselves interacting with someone of higher, lower, or equal power. Sex was varied so that some people imagined interacting with a member of the same sex and others imagined interacting with a member of the opposite sex. Men and women did not vary in their likelihood of using various influence strategies. However, people were most likely to report using direct strategies when they were in the high power position, and most likely to report using bilateral strategies when power was equal. Thus, social role (or power position) was more important than sex when predicting influence strategies. In a second experimental study, Sagrestano (1995) matched people who disagreed on issues and then manipulated the level of expertise power by giving one participant more information on the issue than the other. She again found that influence strategies varied as a function of a person's power position rather than a person's sex (as reported in Sagrestano, Heavey, & Christensen, 1998). Finally, Sagrestano, Christensen, and Heavey (1998) had married couples discuss two issues relevant to their relationships—one issue involved the wife wanting to change the husband's behavior, while the other issue involved the husband wanting to change the wife's behavior. They found that social role (operationalized as whether the person was trying to influence the spouse or to resist being influenced) was related to specific influence strategies, such as giving explanations or asking questions, but sex was not.

Sex differences in power strategies also fail to emerge in studies on gay male and lesbian relationships. For example, Fablo and Peplau (1980) demonstrated that although men and women in heterosexual relationships used somewhat different power strategies (with men using more direct, verbal tactics and women using more indirect, nonverbal tactics), lesbians and gay men did not differ in their use of power strategies. Moreover, across both gay and straight relationships, the more powerful partner used more direct strategies than the less powerful person. Similarly, scholars have demonstrated that the partner higher in relative power tends to use more interruptions (Kollock et al., 1985) as well as more autocratic influence strategies (Howard et al., 1986), regardless of the couples' sexual orientation.

The work comparing gay and straight relationships, combined with Sagrestano's studies, show that influence strategies vary more as a function of power position than sex. Future studies need to determine whether this finding extends to nonverbal behaviors related to dominance and influence, especially since Woods (1988) found that men used more dominant behavior than women (in terms of talk time and interruptions) regardless of whether they were in a high or low power position. Hall and Friedman (1999) also examined the joint effects of status and gender on dominant be-

havior. They had organizational members who varied in status interact with one another. Their data failed to support Henley's prediction that power explains sex differences in nonverbal behavior. "Indeed, gender and status differences did not parallel each other, and gender differences became more pronounced when status differences were controlled" (Hall & Friedman, 1999, p. 1082). These results suggest that some sex differences in dominant behavior are not rooted in power or status differentials. Hall and Friedman called for more research separating gender and status to determine whether these variables have independent effects on dominant and submissive nonverbal behavior.

Tactile behavior provides a final example of the complexities of the gender–power relationship. Henley (1977) argued that initiating touch, which is perceived as a power move, is the prerogative of men rather than women. Although several studies have shown that men initiate touch more than women in formal, public settings (e.g., Henley, 1973; Major, Schmidlin, & Williams, 1990), this sex difference seems to vanish or reverse in intimate, private settings (Major, Schmidlin, & Williams, 1990; Stier & Hall, 1984). Moreover, factors such as age and relationship stage appear to moderate the relationship between gender and touch. Several studies have demonstrated that among younger couples or those in the beginning stages of relationship development, the man is more likely to initiate touch. Among older couples and those who are in stable or married relationships, the woman is more likely to initiate touch (Guerrero & Andersen, 1994; Hall & Veccia, 1990; Willis & Briggs, 1992; Willis & Dodds, 1998). These findings are consistent with social role theory in that men are socialized to be proactive when it comes to initiating romantic relationships, whereas women are socialized to maintain intimacy once relationships have developed.

## **REDUCING POWER DIFFERENTIALS**

Regardless of whether the man or the woman is in a more powerful position in a heterosexual relationship, relational partners may want to engage in behaviors that show equality rather than creating or reinforcing power differentials. Partners in gay male and lesbian relationships also strive for equality, but like their heterosexual counterparts, most gay couples report that their relationships are not exactly equal (Peplau & Cochran, 1980; Reilly & Lynch, 1990). Several studies suggest that having an equal (or nearly equal) balance of power is beneficial in close relationships, with egalitarian marriages associated with more relational satisfaction, less verbal aggression, and more respect for one another (Aida & Falbo, 1991; Roiger, 1993; Schwartz, 1994; Witteman & Fitzpatrick, 1986). Furthermore, people in gay male, heterosexual, and lesbian relationships all value equality (Peplau & Cochran, 1980).

If there are unwanted power imbalances in a relationship, one seemingly obvious way to move toward equality could be for the more powerful individual to display less dominant behavior. Another way might be for the less powerful person to display more dominant behavior. However, changing the amount of dominant behavior is probably too simplistic a strategy. As we noted earlier, sometimes the more powerful person engages in less overtly dominant behavior because he or she does not need to show power to be influential. Conversely, the partner with less relative power might strive to become more influential by increasing dominant behavior, but those bids for dominance might not be successful. Thus, a better strategy for reducing power differentials may be to communicate messages that reflect equality and receptivity.

According to Burgoon and Hale (1984, 1988), behaviors such as postural mirroring or congruence communicate equality, trust, and receptivity. Postural mirroring occurs when two people share the same posture, such as sitting with their legs crossed the same way, walking at the same pace, or standing with arms in the same position. When people display postural mirroring, they are judged by themselves and others as more cooperative (Burgoon, Buller, & Woodall, 1996). Assuming they are reciprocated, behaviors such as smiling, vocal animation, vocal warmth, and head nods can communicate strong messages of equality, liking, and positive regard, which function to reduce power differentials (Coker & Burgoon, 1987; Gustell & Andersen, 1980; Patterson, 1983). As we explain in the next section, some of these behaviors are also instrumental in influencing others.

## **INTERPERSONAL DOMINANCE THROUGH SOCIAL SKILL**

Power differentials, if any exist, are likely to be minimized when relational partners use dominant behaviors that reflect social skill rather than coercion or threat. In any relationship, partners have goals or desires that are sometimes at odds with each other, as illustrated in the situation involving Tina and David at the beginning of this chapter. If Tina and David can negotiate so that they can each fulfill some their vacation-related goals, they will be more likely to regard their interaction as satisfying and equitable. Thus, being able to influence others to achieve personal as well as relational goals is a critical skill. Given this reasoning, it is not surprising that Burgoon and Dunbar (2000) conceptualized interpersonal dominance as a pattern of behaviors that reflects communication competence. Many of the same behaviors that have been classified as key components of communication competence—expressiveness, smooth interaction management, composure—are similar to those identified by Burgoon, Johnson et al. (1998) as reflective

of interpersonal dominance. Specifically, Burgoon, Johnson, and Koch conceptualized dominance as a multidimensional construct consisting of five interrelated dimensions: influence, poise, self-assurance, conversational control, and panache or dynamism. Next we discuss the nonverbal behaviors associated with these dimensions.

## **Influence**

Research suggests that people attempt to influence close relational partners, such as friends or family members, more than anyone else (e.g., Rule, Bisanz, & Kohn, 1985). Social influence involves changing someone's thoughts, emotions, or behaviors, including persuading someone to comply with a request or agree to a decision (Burgoon, Buller, & Woodall, 1996). Sometimes social influence occurs due to the use of dominant communication. Although verbal communication is usually the primary channel of persuasion, research demonstrates that nonverbal channels play a complementary role in many situations (Burgoon, Buller, & Woodall, 1996; Segrin, 1993).

One such situation involves trying to gain compliance with a request. Segrin (1993) conducted a meta-analysis to determine the strength and consistency of relationships between nonverbal behaviors and successful compliance-gaining. He found that targets were more likely to comply with requests when the persuader used direct gaze (average  $r = .23$ ), positive and appropriate forms of touch (average  $r = .21$ ), close distances (average  $r = .18$ ), and more professional appearance (including nice dress and grooming, average  $r = .16$ ). For distancing, Segrin noted that compliance seems to increase up to a point; if the persuader gets too close, however, and violates spatial norms, then compliance appears to be less likely. For direct gaze, research suggests that eye contact while speaking (rather than listening) is most effective (Linkey & Fireston, 1990), which comports with the visual dominance ratio discussed earlier.

Although the research Segrin (1993) reviewed is based on interaction between strangers or acquaintances, it seems likely that these same behaviors would play a role in compliance gaining in close relationships. In fact, direct eye contact, touch, and close distancing are more likely to be appropriate in the context of close relationships, perhaps leading partners to use such behaviors more liberally when trying to ingratiate themselves or otherwise seek compliance from one another. The threshold for close distancing may vanish in close relationships, with partners able to step into one another's personal space bubbles as a means of persuasion. Touch may also be used more extensively. For instance, Jones's observational research uncovered a fairly common touch sequence that involves moving from affection to compliance, with relational partners using touch as an ingratiating strategy to get someone to comply with a request (Jones, 1994; Jones &

Yarbrough, 1985). Tina engaged in this sequence with David; she touches his arm before and during her verbal attempt at compliance. Partners may also manipulate physical appearance as a way of reaching their goals. For example, Buss (1988) found that jealous women sometimes enhance their attractiveness as a mate retention strategy. It is interesting to note that attractive women have been found to comply to requests less often than unattractive women, but to get others to comply to their requests more often (Adams & Read, 1983).

Several other behaviors are linked to social influence. Some studies show that people who are more kinesically and vocally expressive are rated as more influential (e.g., Burgoon, Birk, & Pfau, 1990). Liss, Walker, Hazelton, and Cupach (1993) showed that in interpersonal contexts, smiling was associated with more compliance. Together, these studies support the contention by Burgoon, Birk, and Pfau (1990) that nonverbal cues related to expressiveness and pleasantness lead to perceptions of increased liking, which then translate into more social influence. Likewise, research on vocalic cues suggests that vocalic similarity leads to more liking and social attraction, which in turn leads to more persuasion. In a series of studies, Buller and his colleagues (Buller & Aune, 1988, 1992; Buller, Le Poire, Aune, & Eloy, 1992) manipulated the extent to which confederates matched the vocal qualities of participants. Across these studies, confederates were more likely to elicit compliance when they sounded similar to participants. Participants also rated similar sounding confederates as more socially attractive (Buller et al., 1992). In contrast, speaking rate was related to perceptions of competence and overall dominance but not social attractiveness, with a moderately fast speaking rate associated with compliance (Buller et al., 1992).

### **Poise and Self-Assurance**

Because the nonverbal behaviors judged to reflect poise (or composure) and self-assurance (or confidence) overlap to some extent, we discuss them together here. Individuals judged as dominant typically appear poised, relaxed, and composed (Burgoon, Buller, & Woodall, 1996; Burgoon, Johnson, & Koch, 1998; Goffman, 1961; Weisfeld & Linkey, 1985). Poise and relaxation are communicated nonverbally through a set of behaviors that include asymmetrical leg and arm positions, sideways leaning, arm openness, open body position, expressive gestures, less swiveling, and less random leg and foot movement (Mehrabian, 1969; Mehrabian & Ksionzky, 1972). Greater facial pleasantness, smiling, eye contact, and proximity can also send messages of poise, relaxation, and composure (Burgoon, Buller, Hale, & deTurck, 1984; Burgoon & Le Poire, 1999; Patterson, Jordan, Hogan, & Frerker, 1981). Within the context of romantic relationships, Dunbar and Burgoon



(2005) demonstrated that men were judged to be more dominant when they displayed facial pleasantness, body relaxation, and less disfluencies (i.e., speech disturbances other than interruptions). Women were also judged as more dominant by observers when their bodies looked relaxed, and interactional partners rated women as more dominant when they used fewer adaptors. In sum, nonverbal behaviors that combine to show openness, expressiveness, positive affect, and a lack of nervousness combine to communicate relaxation and poise.

Similarly, people are judged as more self-assured or confident when they are vocally fluent, speak in a loud and confident voice, utilize more talk time, have a relaxed, expansive body posture, display few adaptors, and show little random movement (although too still a body position can also reflect tenseness). Guerrero (1996; Guerrero & Jones, 2005) demonstrated that people with anxious (rather than self-confident or secure) attachment styles tend to be less conversationally smooth and composed during interactions with romantic partners. In a study that examined both self-reported dominance (in terms of a personality scale) and observer perceptions of dominance and ambition, Gifford (1994) determined that dominant/ambitious individuals tend to manipulate objects less, use more leg lean, and extend their legs more. Observers were more likely to rate people as dominant and ambitious when they had their arms in an open position, extended their legs, and used purposeful gestures. In another study, individuals who were classified as assertive based on a personality test talked louder than those who were classified as nonassertive (Kimble & Musgrove, 1988), and several studies have shown that moderately fast and loud voices sound confident because the speaker seems to know what he or she is talking about with hesitating or having to think (Burgoon, Buller, & Woodall, 1996). Sorrentino and Boutellier (1975) found talk time to be positively associated with how confident, influential, and competent a person was rated.

Dominance cues related to relaxation and confidence also appear to play a role in the attraction process. In a study based on a social evolutionary framework, Sadalla et al. (1987) tested the prediction that women would be more attracted to dominant than nondominant men. To manipulate dominance they had men take seats close to a woman and then interact with one another. The men in the dominant condition sat in very relaxed body positions and talked loudly, quickly, and clearly to one another. The men in the nondominant condition sat up straight and talked quietly to one another. As predicted, women were more attracted to the men who exhibited nonverbal cues related to dominance.

Of course, a person can go overboard when communicating relaxation or confidence. Norton's (1983) findings regarding effective communication styles imply that relaxation helps distinguish dominant behavior that is socially skilled from dominant behavior that is intimidating or authoritarian



(see also Burgoon & Bacue, 2003). So a moderately high level of relaxation may be essential. However, too much relaxation can signal boredom or disinterest, which could backfire within a relational context. The level of relaxation that is effective may also vary based on a person's relative power within a relationship. Burgoon and Bacue (2003) argued that "extremes in postural relaxation function as negative expectancy violations and therefore would presumably constitute unskillful performances" (p. 201). They further suggested that too much relaxation is likely more detrimental for a person of relatively low power, who needs to be engaged to be effective. Conversely, too little relaxation may be more detrimental for the person in the higher power position who should appear confident (rather than tense or worried) about the outcome of an interaction. Similarly, as studies on talk time and vocal forcefulness suggest, too much confidence may come across as controlling or smug, which could lead to negative individual and relational outcomes (Burgoon, Buller, & Woodall, 1996).

### **Conversational Control**

As noted previously, the ability to begin, manage, and end interaction is related to power. The enactment of this ability constitutes a form of dominance (Burgoon, Johnson, & Koch, 1998). Cappella (1985) contended that "Interpersonal power, status, competence, and attraction depend, at least in part, upon our ability to control speaking and listening roles" (p. 70). Indeed, without interactional control, relationships might never begin. Most of the time, an individual must take the initiative to meet and get to know another person. For example, researchers have described an attention stage as the first phase of courtship (Schefflen, 1965, 1974; see also chap. 3, this volume). Nonverbal behaviors such as looking over at someone, smiling demurely, positioning oneself in view of someone, and bumping into someone (seemingly accidentally although intentionally) are fairly common ways of trying to capture a potential romantic partner's attention.

Within established relationships, turn-taking cues, talk time, interruptions, and listening behavior are all part of the interaction management process. Socially skilled individuals can use these behaviors as a dominance move by controlling the floor in such a way that her or his opinions and ideas are heard. In Dunbar and Burgoon's (2005) study on romantic relationships, observers rated relational partners as more dominant when they talked a lot. Similarly, Lustig (1977) summarized research showing that people who talk more are generally perceived as more dominant and influential, and to possess more leadership qualities, especially if they also demonstrate good listening skills when they move out of the speaking role. Nonverbal cues such as vocal backchannelling, nodding, and giving eye contact all show that a person is listening carefully. An experimental study by

Burgoon and Le Poire (1999) also illustrates the association between interactional management cues and perceptions of dominance. In their study, confederates manipulated different interaction management cues (along with other nonverbal behaviors). The participants who interacted with them, as well as observers who viewed the interactions on videotapes, then rated the confederates' level of dominance. As predicted, Burgoon and Le Poire found that observers rated people as more dominant when they used fluent speech but enacted unsmooth turn-switching (likely due to the increased number of interruptions and simultaneous talk that occur in dyads where one or both individuals are using dominant communication). They did not, however, find a similar effect for participants. Burgoon and Le Poire explained this finding by suggesting that observers were able to detect subtle cues related to conversational management better than participants, who were cognitively busy managing the interaction themselves. Dunbar and Burgoon (2005) found a similar pattern for men in their study on married and cohabiting couples; men were judged by observers as more dominant when they were vocally fluent but interrupted their partners. This finding, however, did not extend to women or to partner ratings of men.

Leave-taking behaviors can also be related to dominance. As noted earlier, powerful people have the prerogative to end meetings or conversations. Similarly, relational partners can show dominance by introducing a topic, changing the subject, or ending an interaction. In initial interaction, one form of leave-taking behavior involves rejecting someone's romantic advances. Trost and Gabrielidis (1994) demonstrated that people frequently use nonverbal communication to communicate such rejection, thereby taking control of the situation. These nonverbal strategies included: ignoring the person; maintaining a large proxemic distance; acting cold, indifferent, or casual; subtly displaying one's wedding ring; and acting nervous and uneasy. In Trost and Gabrielidis' study, 54.3% of the men and 68.5% of the women they surveyed reported using one or more of these nonverbal strategies to end interaction with individuals who were romantically interested in them.

Other more generic leave-taking behaviors include decreasing gaze (sometimes preceded by mutual gaze), facing away from a partner, looking at one's watch or a clock, rapid head nodding, gathering up possessions, and tapping against a table or other object (Knapp, Hart, Friedrich, & Shulman, 1973; O'Leary & Gallois, 1985). People who have power may not need to engage in such behaviors very long, or at all, when they want to exit a situation. When two people share a close relationship, leave-taking behaviors typically include smiling and other signs of positive affect, such as vocal warmth, that indicate that although the interaction is ending, the relationship will continue (Burgoon et al., 1996). When a relational partner has a lot of power, he or she may be able to end interactions more abruptly or

without as much socially polite nonverbal behavior. As Baxter (1984a) demonstrated, the more powerful person is often less polite.

### **Panache or Dynamism**

Sometimes, the more powerful person is also more dynamic. Indeed, Burgoon, Johnson, and Koch (1998) found *panache* or dynamism to be a key component of dominant communication. People who possess panache have a dramatic, memorable, and attention-grabbing communication style that is immediate, expressive, and energetic.

Immediacy behaviors decrease the physical and psychological distance between people, making the interaction more stimulating (Andersen, 1985; Patterson, 1983). As Mehrabian (1971b) first put it, the immediacy principle revolves around the idea that “People are drawn to persons they like, evaluate highly, and prefer; and they avoid or move away from things they dislike, evaluate negatively, or do not prefer” (p. 1). From this perspective, immediacy is an essential part of influencing others; immediacy helps secure attention and cement behavioral or attitudinal change. Immediacy can also help establish referent power. Key nonverbal immediacy behaviors include close distancing, touch, gaze, direct body orientation, and forward body lean (Patterson, 1983), as well as behaviors related to expressiveness, such as vocal animation, gesturing, and facial expression (Andersen, 1985).

Empirical evidence supports the idea that immediate, expressive behaviors are related to power and influence (Burgoon, Buller, & Woodall, 1996), but dynamism may be a more potent tool for some communicators than others. For instance, in an early study, Pearce and Brommel (1972) contrasted perceptions of speakers who varied in terms of credibility (high vs. low) and speaking style (dynamic vs. conversational). They operationalized a dynamic speaking style in terms of a voice that is faster, louder, and more animated than is typical during conversation. Pearce and Brommel found that highly credible people were more persuasive when they used a dynamic speaking style, whereas less credible people fared better when they used a more conversational style. This finding suggests that powerful individuals may be expected (or given the latitude) to be more forceful and dramatic than less powerful individuals, the latter of whom people expect to communicate in a more normative, conversational manner.

A later study by Burgoon et al. (1990) suggests that some nonverbal behaviors related to dynamism might be more strongly related to influence than others. In this study, kinesic expressiveness and immediacy led to perceptions of dynamism, which ultimately increased the likelihood of persuasion. Vocal expressiveness did not associate with more persuasion, but increased gaze, smiling, facial expressiveness, body movement, and vocal pleasantness all did. Previous research also suggests that certain types of

kinetic behavior are important indicators of power and dynamism. Burgoon, Buller, and Woodall (1996) summarized this line of research by stating, "Large, sweeping gestures also extend the individual's spatial sphere of control and add an air of dynamic energy. Frequent gesturing, use of emblems and pointing gestures, and a confident, rapid gait likewise contribute to the sense of potency" (p. 315).

## **INTERPERSONAL DOMINANCE THROUGH INTIMIDATION OR THREAT**

In contrast to using socially skilled behaviors such as poise or panache to influence others, people sometimes threaten and intimidate partners in an attempt to gain or maintain interpersonal control. Although such coercive behaviors can be effective in the short term, research suggests that they lead to relational problems in the long run (e.g., Frieze & McHugh, 1992; Gray-Little & Burks, 1983). For example, in a study of Spanish couples, distressed couples used more domineering one-up messages and displayed more negative affect than nondistressed couples (Escudero, Rogers, & Gutierrez, 1997). Research also suggests that people may be more likely to resort to coercive, threatening, or violent strategies when they do not possess the ability to achieve dominance using more constructive behaviors (Christopher & Lloyd, 2001; Infante, Chandler, & Rudd, 1989). Next, we discuss some of the key nonverbal behaviors used to threaten or intimidate a partner as a means of achieving power or influence.

### **Eye Behavior**

At many zoos there are signs warning patrons not to make direct eye contact with the gorillas. These primates interpret direct stares as a threat and react with hostility. Indeed, the threatening stare is a primary dominance display that cuts across various species and is universally understood by humans (Dovidio & Ellyson, 1985). Powerful people are more likely to engage in unwavering, direct looks or stares, and to break eye contact first (Exline et al., 1975). Steady, extended gaze is generally perceived as dominant and threatening, especially when used by a high status or powerful person (Burgoon, Buller, & Hale, 1984; Ellsworth, Carlsmith, & Henson, 1972). Eye behavior is also likely to be associated with dominance attempts in close relationships, with direct stares or rolling eyes showing contempt or disgust (Gottman, 1994).

### **Vocalic Behavior**

Two seemingly opposite types of vocalic behavior can be intimidating—volume and silence. People who speak in loud, moderately rapid, and fluent voices are perceived as dominant, confident, and competent (Apple,

Streeter, & Krauss, 1979; Buller & Aune, 1988, 1992). When voices become especially loud, they are often heard as intimidating as well as dominant (Mehrabian, 1972; Schefflen, 1972), particularly when they convey anger. Thus, some researchers have cautioned that although loud voices send messages of power and dominance, they can also show disrespect and inconsideration (Remland, 1982). On the other side of the vocalic spectrum, silence can sometimes be intimidating and threatening. The ultimate forms of silence in relationships—such as failing to acknowledge a relational partner's presence, giving a partner the silent treatment, failing to respond to a partner's question, or ignoring someone's suggestions or requests—are often perceived as aggressive and hurtful. In the sphere of organizational power, Bruneau (1973) discussed silence as a potent aggravator of frustration, with subordinates feeling disenfranchised and unimportant when their requests and suggestions are followed by silence. Similarly, in relationships silence can lead to frustration and feelings of disrespect and neglect.

### **Spatial and Chronemic Violations**

Relational partners can also intimidate one another by engaging in spatial or chronemic violations. Mehrabian (1981) noted that people display dominance when they approach others' territory in a rapid and deliberate fashion or when they enter people's territories uninvited. In contrast, people display submission when they hesitantly approach others. Getting in a partner's face, going through a partner's belongings without permission, and repeatedly entering a room when a partner wants to be alone can all function to threaten or intimidate someone. Similarly, people can use chronemic violations to gain control. For example, one common power struggle in relationships occurs over the television and the remote control, with partners trying to control who watches what when (Walker, 1996). Interrupting a partner who is on the Internet or working (e.g., "David, I need you to get off the computer now so I can check the stock report") also constitutes a form of chronemic violation because it challenges a person's control of their own time and activity. People who are possessive also try to control their partner's time and activities, sometimes by restricting their access to rivals or spending extra time with them (Buss, 1988; Pinto & Hollandsworth, 1984).

### **Obsessive Relational Intrusion**

Cupach and Spitzberg (1998) identified a set of behaviors labeled obsessive relational intrusion that are related to trying to control a former or wished-for partner through behaviors such as space and chronemic violations. According to this line of research, people engage in obsessive relational intrusion behaviors when they want to establish or re-establish a relationship

with someone who is not interested in them. The most common situations involving obsessive relational intrusion involve unrequited love or the quest to get back together with a former partner. Several of the obsessive relational intrusion behaviors identified by Cupach and Spitzberg (1998) involve nonverbal behavior. For example, in a study of undergraduate victims of obsessive relational intrusion, 62% of respondents could recall at least one time when a person watched or stared at them from a distance (Cupach & Spitzberg, 1998). Other instances of nonverbally based obsessive relational intrusion behaviors included: having someone drive by one's home or place of work (57%); being spied on by third parties (55%); receiving unwanted notes, cards, or letters (45%); having someone go through one's private things (34%); being physically shoved, slapped, or hit (32%); having one's property damaged (26%); being forced to engage in unwanted sex (16%); and having one's home or apartment broken into (8%). Clearly, some of these behaviors are both threatening and illegal. From a power and dominance perspective, obsessive relational intrusion behaviors are especially interesting because the person using these behaviors is clearly in a low power position relative to the desired partner. As the principle of least interest specifies, this person loves more, which puts her or him in the weaker position. As a way of trying to gain control, some individuals in this position may resort to threatening tactics such as obsessive relational intrusion.

## **Violence**

Violence is one form of obsessive relational intrusion. Unfortunately, violence is used in intact relationships as well as by those seeking to connect or reconnect with someone. Marshall (1994) defined violence as physically forceful acts that can vary in intensity from relatively mild (e.g., pulling someone's arm a little roughly or throwing an object) to extreme (e.g., beating up or killing someone). According to Marshall's careful review of literature, most violence in relationships is "performed at a low or moderate level of intensity and severity," but this fact should not in anyway diminish the damaging physical or psychological effects that violence has on couples (p. 284).

Violent communication is discussed in more detail in chapter 8. For now, however, it is important to mention that violent behavior can have a profound influence on the power dynamics of a relationship. People who use violence may be attempting to gain power and control their partners, and those who are the recipients of violence may indeed feel powerless and entrapped in an unhealthy relationship (Christopher & Lloyd, 2000; Marshall, 1994). According to Marshall's research, some of the more common violent behaviors used in relationships by men include: grabbing the partner sud-

denly or forcefully; holding or pinning down the partner; shaking or handling the partner roughly; and pushing or shoving the partner. The most common violent behaviors used by women are: pushing or shoving the partner; slapping the partner with the palm of the hand; grabbing the partner suddenly or forcefully; and scratching the partner. These tactile behaviors are undoubtedly among the most threatening and destructive nonverbal behaviors experienced in close relationships. It is doubtful, however, whether such behavior constitutes a form of long-term interpersonal dominance since a submissive response to violence is likely based on coercion rather than on enduring forms of social influence.

## SUMMARY

Power and dominance are key characteristics of close relationships. Power generally refers to a person's ability to influence others and to resist others' persuasive attempts. Interpersonal dominance refers to communication strategies that people use successfully to gain or express power. People can communicate dominance through socially skilled behavior or through intimidation and threat. Within relationships, partners are often somewhat unequal in power. At this point, the jury is still out regarding the association between relative power and dominant communication. Some studies (e.g., Kollock et al., 1985) have demonstrated that the person in the power position uses more dominant communication whereas other studies (e.g., Dunbar, 2003) have shown that the person with less power uses the most dominance. Other studies have shown that people in egalitarian relationships use either more (Felmlee, 1994) or less (Aida & Falbo, 1991) dominant behavior than partners in non-equal relationships. In advancing dyadic power theory, Dunbar (2003, 2004; Dunbar & Burgoon, 2005) suggested that it may be fruitful to examine curvilinear effects related to power differentials. She theorized that people who are somewhat high or low in relative power may use the most dominant behavior, while those who are very high in relative power behavior may not need to show much dominance, and those who are very low in relative power may accommodate and submit. This prediction, along with the discovery of nonverbal behaviors associated with different levels of relative power, awaits further testing.

Research has uncovered a variety of nonverbal behaviors associated with power, including larger and more private spaces, central positions, visual dominance, elevation, and the prerogative to break nonverbal norms and control interaction. Some research suggests that sex differences in nonverbal communication can be (at least partially) explained by power. Consistent with Henley's (1977, 1995) subordination hypothesis, men have been

shown to engage in certain dominant behavior more than women. However, Hall and her colleagues have criticized the subordination hypothesis for being overly simplistic in equating women's behavior with submissiveness and men's behavior with dominance (e.g., Hall & Friedman, 1999; Hall & Halberstadt, 1997). Indeed, a number of studies have shown that power or position is a better predictor of dominance than is gender (e.g., Sagrestano, 1992).

Interpersonal dominance is also associated with a wide array of behaviors. Some of these behaviors reflect social skill, such as being able to influence others, project a poised and confident image, control the conversational floor, and exhibit dynamism. Partners who engage in these socially skilled dominance behaviors are likely to gain or maintain power, while keeping their relationships satisfying. Furthermore, partners who use dominant behaviors reflecting social skill may be better able to solve relational problems and manage disputes (see also chap. 8, this volume). Other dominance behaviors are based on coercion, threat, or intimidation. These behaviors include eye behavior (e.g., direct stare, rolling eyes), a loud voice, silence, spatial or chronemic violations, certain obsessive relational intrusion behaviors, and violence. People may be most likely to engage in these types of behaviors when they are in a low power position, or when they do not possess the skill to influence the partner using nonthreatening tactics. Although threat and intimidation may sometimes be successful in the short term, over the long haul research suggests that such behavior has a detrimental effect on relationships.



## Interpersonal Deception

*Sensing David's agitation, Tina acquiesces and decides that the Grand Canyon wouldn't be so bad after all. She and David fly to Flagstaff and make the drive north to a rustic, romantic lodge near the south rim of the Canyon, where they have reserved a room. At first, being away from work and taking in the natural beauty of the area make Tina and David feel relaxed and refreshed. During breakfast on their third full day there, however, an attractive young woman approaches their table and David immediately rises to give her a hug. Although he says things like "what a surprise to see you!" Tina notices that he seems nervous and awkward—and definitely not surprised. When David introduces his friend Ann to Tina, Tina vaguely remembers David mentioning on one of their early dates that he had previously been in a serious relationship with someone named Ann. She begins to have many suspicious thoughts: Is this the same Ann that David used to date? If so, what is she doing here? Did David know she was going to be here? Is that why he pushed so hard for us to come to the Grand Canyon? Almost immediately, her previous sense of calm and relaxation is replaced with the sinking feeling that David was not being completely honest with her.*

Personal relationships are typically founded on trust and a presumption of honesty. For various reasons, however, people opt to be less than completely honest in their relational interactions. Whether it be to hide infidelity or other transgressions, to mask one's emotions, to preserve a surprise, or simply to spare another's feelings, deceptive acts are common in relational communication. In this chapter, we discuss what deception is and the forms it can take in personal relationships. We then discuss the process of

deception, both in terms of its psychological and physiological effects on the deceiver and in terms of the nonverbal behaviors that routinely accompany it. Finally, we address the issue of detection by discussing several of the individual and relational factors that predict deception success.

## WHAT IS DECEPTION?

Deception has generally been defined as the knowing and intentional transmission of information by a sender for the purpose of fostering a false belief in the receiver (Buller & Burgoon, 1996; Ekman, 1985; Knapp & Comadena, 1979). The transmission of information can be through verbal or nonverbal signals (e.g., answering “yes” or nodding one’s head in response to a direct question) or, as we address below, through the omission of verbal or nonverbal signals that are consequential to the statement being made. Regardless of the form of deception used, the end result is an intentionally fostered false belief on the part of the recipient.

Before we discuss various forms of deceptive communication in detail, let us acknowledge briefly what is excluded in this definition of deception. First, this definition excludes the communication of false information believed by the sender to be true, such as would be the case if a father were to tell his daughter that a concert began at 7:00 p.m. because he believed that it did, even though it actually began at 6:00. It similarly excludes the accidental transmission of false information. For instance, if a husband and wife were engaging in teasing behavior, saying things to each other that were not factually true, and a passerby overhearing the exchange believed the statements to be true, the couple would not be guilty of deception under this definition because they were not communicating with the intention of causing the passerby to form a false conclusion.

This definition also excludes what people often refer to as *self-deception*. Gur and Sackeim (1979) defined self-deception as occurring when a person simultaneously holds two contradictory beliefs but is unaware that he or she holds one of them. Self-deception falls outside of the traditional definition of deception in at least two ways: first, it does not involve the transmission of information from one person to another; and second, one cannot foster a false belief in oneself while knowing all along that the belief is false (see Fingarette, 1969).

Finally, this definition of deception excludes the transmission of false information that is not intended to be believed. A good example of such a situation is the use of sarcasm. When people behave in a joking or sarcastic manner, for instance, their nonverbal behaviors (particularly their vocal behaviors and facial expressions) signal to the receiver that the information being conveyed is not meant to be believed literally (see Zuckerman, DeFrank, Hall, Larrance, & Rosenthal, 1979).

## Forms of Deception

Deceptive communication can take a number of forms. In this section, we discuss two characteristics of deceptive acts that allow for categorization of their forms. The first is the manner in which a deceptive behavior fosters a false impression on the part of the receiver, and second is the extent to which a deceptive act is sanctioned or proscribed within a given social system.

**Means of Fostering False Impressions.** Behaviorally, deception includes both acts of simulation (giving wrong or misleading information) and acts of dissimulation (hiding or omitting relevant information). Deceptive acts in the former category can range from minor exaggerations to outright falsification. *Falsification* is the intentional presentation of untrue information as though it were true. For instance, if a job applicant were to claim to have held a position that he or she never actually held, this would qualify as falsification. Two studies examining the forms of deception people use have reported that falsification is a common form. In their diary study of everyday deceit, Metts and Chronis (1986) found that falsification was used in nearly half (48%) of all deceptive statements, whereas an earlier study by Turner, Edgley, and Olmstead (1975) had reported that falsification characterized 30% of the deceptive acts surveyed. Participants in the Metts and Chronis study indicated that they commonly used falsification as a means of deception in situations when attempting to protect their images, avoid hurting their partners, or avoid relational trauma.

*Exaggeration* involves overstating or amplifying something that is true in principle. For instance, one might exaggerate about prior work history when applying for a new job by overstating the level of responsibility one had at a previous job. In this instance, the general information (employer, type of work, etc.) about the previous job would be true, but the details would be overstated so as to create a more favorable impression on a prospective employer. Turner et al. (1975) reported that only 5% of the deceptive acts they surveyed involved exaggeration, although the percentage may actually be higher if communicators fail to regard everyday exaggerations as forms of deception.

By contrast, acts of dissimulation (which are sometimes referred to as sins of omission) involve the withholding of information that is consequential to the impression being created. In an act of dissimulation, all of the information the speaker provides may actually be true; however, a false impression is created in the receiver by the information that is not provided.

One form of dissimulation is *equivocation*, which involves providing vague, ambiguous answers to a question, evading the question, or even changing the topic in an effort to prevent directly answering it. When pro-

viding equivocal answers to questions, people may mislead others by talking around a question, appearing to answer it without really doing so. Bavelas, Black, Chovil, and Mullett (1990) suggested that equivocation is a popular strategy for deception because people can use it to create false impressions without actually being dishonest or saying anything untrue. Indeed, in the study by Turner et al. (1975), equivocation was the most commonly used form of deception, characterizing 32% of the deceptive acts surveyed.

Another form of dissimulation is outright *omission*, which involves hiding or withholding information that, if it were revealed, would change the nature of one's story. For instance, a teenager explaining to his mother how he wrecked her car might provide several truthful details of the incident but strategically omit those that suggest he was responsible for the crash, in an effort to hide or downplay his culpability. Omissions can take the form of concealment, wherein all of the relevant truthful information is withheld, or half-truths, wherein only part of the information is withheld. Metts and Chronis (1986) reported that concealment was used 27% of the time in their study, whereas half-truths were used 23% of the time.

As forms of deception, falsification, exaggeration, equivocation, and omission are distinct communicative behaviors but they need not be used in isolation. Indeed, it is quite possible for a person to use multiple forms of deception within a given communicative act. When misleading another, for instance, one might offer some information that is untrue (falsification), while also overstating other parts of the story (exaggeration), leaving out certain facts (omission), and being ambiguous about some details (equivocation).

**Social Proscription.** Most forms of deception are considered immoral by almost all cultures (Druckman & Bjork, 1991). However, some communicative acts that fit the definition of deception are tolerated, or even sanctioned, by social norms and customs. A good example involves the forms of deception associated with politeness. When commenting on another's appearance, for instance, norms of politeness generally dictate that one accentuate the positive aspects of the appearance and neglect the negative, so as to avoid hurting the other person's feelings (see, e.g., Martin, 1991). Politeness norms not only dictate this type of deceptive response but require it and even offer sanctions for its violation (e.g., corrective comments such as "that's not a very nice thing to say"). Joking, teasing, role playing, and engaging in make-believe or fantasy talk are all further examples of forms of deception that tend to carry little or no social disapproval.

That a deceptive act may not be socially proscribed is consequential for two reasons: first, senders and receivers may not consider the act to be a form of deception in the first place; and second, senders may not experience the emotional and physiological consequences that attend socially pro-

scribed behaviors. Underlying forms of socially acceptable deception (including politeness) is a consideration for the respective harms that deceiving and truth-telling can have on receivers. Deceptive acts that are not considered harmful (e.g., joking, role playing) tend not to elicit the serious social disapproval that accompanies deceptive acts such as falsification or omission. Conversely, the sanction of deceptive acts in the service of politeness recognizes that bald, unedited honesty can be extremely damaging to receivers (e.g., when they are told outright that they are incompetent, unattractive, or unloved) and that deception designed to mitigate or soften these damages may be warranted (see Brown & Levinson, 1987). Indeed, research has found that when people deceive with the motivation to help others or simply to be polite, they experience little detection apprehension and may actually consider their deceptive acts to be warranted. As a result, they display few of the nonverbal signals that characterize deception in other contexts (see, e.g., Buller & Burgoon, 1994; Hample, 1980; Metts & Chronis, 1986).

When deception is attempted in the service of unsanctioned ends, however, it often covaries with certain mental and physical activities for the deceivers. In the next section, we address some of the mental and physical correlates of deceptive behavior, an understanding of which can aid in receivers' attempts to detect deception when it is present.

## **WHAT HAPPENS TO PEOPLE WHEN THEY DECEIVE?**

Interest in the ability to detect deception has characterized humankind for centuries. Despite both systematic and serendipitous advances in deception detection, however, a foolproof method still eludes us. A large part of the reason is that researchers have not yet identified a profile of the deception experience—a set of mental, emotional, physiological, and/or behavioral activities—that characterizes deceptive communicators without fail.

Despite the lack of a foolproof method of deception detection, research has illuminated a number of markers that typically characterize deceivers. In this section, we address the cognitive, emotional, and physiological activities that senders tend to experience when attempting to deceive others. As we addressed above, however, the extent to which these experiences accompany deception is likely related to the level of social disapproval that the deceptive act would elicit. Thus, they should be more pronounced for acts of perjury, for example, than for acts of politeness. Our discussion here also presumes that senders are possessed of normal emotional and cognitive faculties. In cases of psychopathology, for example, senders may not appreciate the difference between deceiving and truth-telling, nor be aware of when they are deceiving. In such instances, senders are unlikely to ex-

hibit the cognitive, emotional, and physiological correlates of deception that characterize the normal adult population.

One of the earliest theoretic treatments of deception was Ekman and Friesen's (1969a) *leakage hypothesis*. The hypothesis was grounded in the idea that deception is an emotionally charged activity that is accompanied by physiological arousal on the part of the deceiver. Physiological arousal produces outcomes such as increased perspiration, increased muscular activity (e.g., shaking and fidgeting), pupil dilation, and vocal tension, that *leak* out of the body through channels that the deceiver tends to ignore. For instance, deceivers may focus on their verbal message, their eye contact, and their facial expressions during a deceptive interaction, while simultaneously forgetting about other nonverbal channels such as their kinesics or vocalics. Their deception-induced arousal may, therefore, leak out of their bodies through extraneous hand movement (such as fidgeting or excessive gesturing) or through vocalic cues (such as increased modal pitch or vocal tension).

Other outcomes of arousal leak out of the body through channels that the deceiver simply cannot control—perspiration or pupil dilation, for instance. In either case, these leakage cues can give deceivers away, despite deceivers' best efforts to control their presentations. Recognizing that some channels of nonverbal communication are more controlled or controllable than others, Ekman and Friesen predicted that leakage cues conveyed through the least controlled or controllable channels would be the most accurate and reliable indicators of deception.

The leakage hypothesis suggested to researchers that, in terms of nonverbal behaviors, they should focus on those channels that are not typically controlled (rather than those that are) for cues to deception. What mental, emotional, physiological, and/or behavioral activities, in particular, are relevant to the detection of deception? Zuckerman, DePaulo, and Rosenthal (1981, 1986) provided an answer in their *four-factor theory*. This theory offers that four specific internal processes tend to accompany deceptive behaviors. The first is physiological arousal, which includes the nervous system outcomes implicated in the leakage hypothesis (such as perspiration, pupil dilation, etc.). The second is the deceiver's own emotional reaction to his or her guilt at deceiving and/or fear of getting caught deceiving. The third process is the increased cognitive effort required to formulate a plausible deceptive message. The final process is the deceiver's attempted control of his or her presentation of the deceptive message so as to maximize its plausibility and suppress cues to the deception. An important notion that Zuckerman et al. carried over from the leakage hypothesis is that these cues are hierarchical in terms of their controllability, such that some (e.g., eye contact) are more controllable than others (e.g., pupil dilation). We discuss each of these characteristics in greater detail below.

## Physiological Arousal

People's attempts to deceive are often accompanied by some level of heightened physiological arousal, which tends to manifest itself in increased activity of the autonomic nervous system (Podlesny & Raskin, 1977; Waid & Orne, 1981). Research in polygraphy (and psychophysiology in general) has offered much in the way of understanding about the physiological arousal that accompanies deception. The polygraph test, as it is used today, can trace its roots to Harvard psychologist William Marston, who reported in 1917 that systolic blood pressure (the pressure exerted against the walls of the arteries when the heart contracts) rose when test subjects were being deceptive. He eventually introduced the lie detector test (Marston, 1938), and its results were used in a now famous case involving accused murderer James Frye, who attempted to introduce as evidence the fact that Marston's blood pressure test indicated he was being honest in his denial of the crime. In *Frye v. United States* (293 F.1013 1924), which would become a landmark test case, the U.S. Supreme Court ruled that the results of such lie detector tests are inadmissible as evidence in criminal trials.

Despite this, however, research on the physiological reactions associated with lying has flourished. Indeed, Iacono (2000) noted that the study of deception has been the "most prevalent application of a psychophysiological technique" as research on polygraphy has evolved over the last 75 years (p. 772). The modern polygraph machine measures three types of psychophysiological indicators of the arousal associated with deception: (1) electrodermal activity, which is measured as either skin conductance or resistance of electrical current; (2) pneumatic activity, which is the rate of respiration; and, (3) cardio activity, including heart rate and relative blood pressure (Iacono, 2000).

Of course, the important question for researchers and practitioners of polygraphy is whether these physiological markers are valid indicators of deception. This is far from a trivial question because, as several researchers have noted, there is no known physiological response that is unique to deception (see Andreassi, 2000). This means that the electrodermal, pneumatic, or cardio arousal measured in polygraphy as indicators of lying could occur for reasons entirely unrelated to the truthfulness of a person's statements (see Furedy & Ben-Shakar, 1991; Furedy, Davis, & Gurevich, 1988; Saxe, 1991). However, experiments conducted both in laboratory and field settings have indicated that polygraph-aided interrogations tend to produce substantially higher than average accuracy in deception detection (e.g., Forman & McCauley, 1986; Kircher, Horowitz, & Raskin, 1988; Patrick & Iacono, 1989, 1991). Of all of the physiological activities measured in polygraphy, electrodermal activity (in the form of skin conductance) has been found to be the most accurate predictor of deception in both field research



(Barland, 1975) and laboratory experimentation (Cutrow, Parks, Lucas, & Thomas, 1972; Thackray & Orne, 1968).

As one might anticipate, polygraph accuracy rates tend to vary according to the technique used by the interrogator (see Ginton, Daie, Elaad, & Ben-Shakar, 1982; Gustafson & Orne, 1964; Horvath & Reid, 1971; for review, see Iacono, 2000); however, research has consistently indicated high reliability ( $\geq .80$ ) among interrogators in their interpretations of polygraph results (see Horvath, 1977; Patrick & Iacono, 1991).

Two important caveats about the relationship between deception and arousal are worth explicating. First, as we alluded to above, a number of studies have demonstrated that the level of physiological arousal accompanying a deceptive act varies according to the seriousness of the lie (and the gravity of the consequences if the lie is discovered), the sender's motivation to succeed in deception, and the sender's ability to rehearse the lie beforehand (see Knapp & Comadena, 1979; O'Hair, Cody, & McLaughlin, 1981; Zuckerman & Driver, 1985). As a result, every deceptive act will not produce the same level of arousal; lying in court while under oath should be expected to produce greater arousal than telling a little white lie to spare a friend's feelings, because the former lie is more serious and carries more grave consequences if discovered. Lies told under conditions of low arousal may be particularly difficult to detect, therefore.

Second, as Buller and Burgoon (1994) noted, although deception is often accompanied by arousal, arousal is not always accompanied by deception. In other words, overt signs of arousal—such as vocal stress, more speech errors and hesitations, pupil dilation, and increased blinking—do not necessarily indicate that deception is occurring. It is important to keep in mind that physiological arousal is the body's way of increasing the energy production necessary to meet a perceived challenge, and communicators routinely face a number of challenges other than deception (see Berntson, Boysen, & Cacioppo, 1992). For example, people may exhibit signs of increased arousal during conversations because of emotional experiences, such as passion or anger, or because of internal physical states that have nothing to do with the conversation itself. In other words, arousal operates to maintain a necessary level of energy in the body—not to help communicators detect deception; although arousal often accompanies deceptive acts, it is not necessarily evidence of them.

### **Negative Affect**

Physiological arousal is, in and of itself, affectively neutral. When it is accompanied by positive affect, such as joy, people experience arousal as excitement or exhilaration. The act of deceiving, however, is often accompanied by at least two negative emotions: fear of being caught and guilt for



being deceptive in the first place (see Ekman & Friesen, 1969a, 1974; Zuckerman et al., 1981). When physiological arousal is accompanied by negative affect, people experience the arousal not as excitement but as anxiety or stress. The presence of negative affect, therefore, can serve as another clue to the presence of deception.

The evidence that people experience negative affect when deceiving comes from research on the verbal and nonverbal correlates of deception. For instance, Knapp, Hart, and Dennis (1974) reported that, compared to truth-tellers, deceivers made more disparaging remarks and used fewer inclusive references, such as references to a group. In their meta-analyses, Zuckerman and Driver (1985) and Zuckerman et al. (1981) both found that people use a greater number of negative statements when lying than when being truthful.

Nonverbal behaviors tend to follow a similar pattern. For instance, liars appear to have more negative affect in their tone of voice than do truth-tellers (Buller & Aune, 1987). Likewise, Ekman, Friesen, and O'Sullivan (1988, 1997) indicated that deceivers may use fewer genuine smiles (as opposed to staged smiles) than truth-tellers. Some studies have also reported that deceivers reduce their eye contact (Knapp et al., 1974), although the evidence on this is mixed. We describe the nonverbal behavioral correlates of deception in greater detail later.

### **Attempted Control**

To avoid detection successfully, deceivers must attempt to control anything in their lies, or in their presentation of them, that would give them away. Paradoxically, however, deceivers' attempts to control their behaviors can backfire, making their deception more transparent. For example, deceivers may exert excessive control over their behaviors, making their performance appear rigid, insincere, and lacking in spontaneity (see Greene, O'Hair, Cody, & Yen, 1985; Knapp et al., 1974). In addition, because some nonverbal channels are easier to control than others—and because some cannot be completely controlled—deceivers are often unable to exert consistent control over all of their behaviors, resulting in discrepancies among nonverbal channels. For instance, verbal and facial cues might present one story, while vocalic and kinesic cues portray a different story entirely (Zuckerman et al., 1981).

Deception researchers have identified three separate but interrelated types of control that communicators exercise in the service of deception success. The first is information management, or control over the content of the lie itself. This task begins with the formulation of a plausible story. By way of example, let us suppose that David is going to lie to Erin, his boss, about why he must miss school the following Friday. He may start by fash-

ioning a story that he thinks Erin will believe (e.g., his grandfather died and he must attend the funeral). In crafting his deceptive message, however, David must attend to a number of other issues. One such issue is how much detail he wishes to offer. Deceivers often provide less detail than truth-tellers about the same type of story, presumably because deceivers do not have the same level of detail at their disposal. A strategic move, then, might be for David to craft his story with a sufficient amount of detail to give the appearance he is not being vague or equivocal. In so doing, though, he must take care to ensure that any detail he adds to his story will not contradict what Erin already knows to be true (which, given the small town in which David lives and works, may be a substantial amount of information). In fact, David may choose to incorporate details into his story that are actually true, so as to preempt her suspicion. He must also try to anticipate Erin's questions and formulate answers for those. Of course, his answers must be every bit as credible as the story itself if David is to be successful in his deception attempt.

A second type of attempted control is behavior management, which refers to deceivers' attempts to control their communicative behavior so as to prevent detection. Hocking and Leathers (1980) suggested that deceivers try to control those behaviors that they stereotypically associate with deception. For example, they may concentrate on maintaining eye contact and reducing overt signs of nervousness if they believe those behaviors to be cues to deception. The four-factor theory by Zuckerman et al. (1981) suggests, however, that these very attempts at controlling one's behavior can backfire, inadvertently leading to other leakage behaviors that belie one's intentions.

Part of behavior management is one's decision about how to communicate the lie. This is largely a decision about channel richness, or how many channels of information a deceiver wishes the recipient to have. For instance, David could tell Erin about his grandfather's funeral in a channel-rich context, such as a face-to-face conversation. In this context, Erin has access to the visual channel (giving her the ability to observe David's behaviors), the verbal channel (giving her the ability to scrutinize his message), and the vocal channel (giving her the ability to ascertain any nervousness or disfluencies in his voice), and she is interacting with David in real (synchronous) time, so she can make judgments about David's performance as it is happening. By contrast, David could choose leaner contexts, such as talking to Erin on the phone (synchronous access to verbal and vocal channels only), leaving her a voicemail message (asynchronous access to verbal and vocal channels), doing an online chat with Erin (synchronous access to verbal channel only), or writing her a note or e-mail message (asynchronous access to verbal channel).

Both channel richness and synchronicity can be implicated in deceivers' attempted control. Asynchronous, channel-lean contexts, such as writing a

note or e-mail message, provide senders with maximal control over the verbal message. They allow for careful crafting of the words and phrases and provide the ability to entertain several drafts of a message before transmitting the desired one. However, this control over the verbal message comes at the expense of two other abilities: the ability to use one's nonverbal behaviors to enhance the credibility of the message, and the ability to perceive and respond to suspicion. In a synchronous, channel-rich context, such as a face-to-face conversation, skilled deceivers can use their facial, kinesic, and vocalic behaviors to enhance the believability of their messages (by, for instance, appearing to speak and behave exactly as they normally would in the same circumstances). They also have the ability to ascertain, on the basis of receivers' own facial, kinesic, or vocalic behaviors, whether receivers are suspicious of the message—and if so, they can engage in *repair behaviors* to reduce receivers' suspicions. Of course, these abilities may come at the expense of control over the verbal message (which may not be delivered aloud with the same precision as if delivered in writing), and they also give receivers the ability to ascertain leakage cues—an ability they gradually lose as channel richness decreases. We will address the effects of interactivity on the ability to detect deception later in this chapter.

A third type of attempted control is image management, or deceivers' attempts to appear credible and trustworthy to recipients. Of course, people are always managing their images (cf. Goffman, 1959). Within the context of deception, however, image management refers specifically to behaviors undertaken by senders to protect their images during a deceptive behavior. DePaulo, Stone, and Lassiter (1985b) posited that image management is a major objective of deceivers and that it will prompt behaviors that are intended both to maintain pleasantness (e.g., smiling, backchanneling) and to deflect attention away from the deceiver. Concerns over relationship management are often intertwined with image management motivations. When deception occurs within ongoing relationships, whether romantic, platonic, familial, or professional, deceivers may strive to manage their images for the purpose of managing, and preventing damage to their relationship with the receivers. As Buller and Burgoon (1994) noted, however, experimental evidence for image and relationship management behavior has been mixed, warranting caution when drawing generalizations about what receivers do to protect their images.

### **Cognitive Strain**

The fourth factor in the theory by Zuckerman et al. recognizes that, in general, creating a lie is a more demanding task than telling the truth. To be successful, deceivers must attend to multiple issues, many simultaneously. If the lie is planned, deceivers must begin by crafting plausible messages that are logically consistent and that do not contradict other information that receiv-

ers may already have. They must also anticipate potential questions and craft responses; such responses must also be logical and consistent with receivers' knowledge. Deceivers must decide on the modality for conveying the lie. If they convey it in a real-time interaction (such as face-to-face or via telephone), they must also attend to receivers for potential suspicion cues and, if they perceive suspicion, they must engage in conversational repair behaviors to mitigate that suspicion. In addition, they must be aware of their own behaviors in order to minimize leakage cues (see, e.g., Buller & Burgoon, 1996; Gilbert, Pelham, & Krull, 1988; Zuckerman et al., 1981).

Attending to all of these demands can strain people's cognitive resources, such that deceiving is a more cognitively demanding activity than is truth-telling. As Mark Twain opined in his 1894 *Notebook*, "If you tell the truth, you don't have to remember anything." The cognitive demands of deception are important not only because they require an adequate intellectual capacity to meet (which may be part of the reason why children are generally less successful at deception than adults) but also because they take senders' attention away from controlling potential leakage cues and responding to perceived suspicion. The cognitive strain of deception appears to be even greater when the lie is spontaneous, since the speaker doesn't have the advantage of planning (Cody & O'Hair, 1983; Miller, deTurck, & Kalbfleisch, 1983; O'Hair, Cody, & McLaughlin, 1981).

These four factors—physiological arousal, negative affect, attempted control, and cognitive strain—need not operate in isolation. Rather, Zuckerman et al. (1981) propose that deception is often accompanied by most or all of these experiences. Why does the internal experience of deception matter? Because an understanding of what happens to people internally when they attempt to deceive others can illuminate the nonverbal behaviors they are likely to manifest externally.

In the next section, we address research on the facial, vocal, and kinesic behaviors that tend to accompany deception attempts. It is important to reiterate that, just as there is no physiological profile that characterizes deception without fail, neither is there any such behavioral profile. Consequently, the nonverbal behaviors we review in the next section can (and often do) occur in the absence of deception, and deception can occur in the absence of these behaviors. However, research indicates that these behaviors, particularly when manifested together, are likely to be indicative of deception.

## **NONVERBAL BEHAVIORS THAT ACCOMPANY DECEPTION (AND SOME THAT DO NOT)**

Humans have long sought the key to detecting deception. As Feeley and Young (1998) pointed out, most behavioral research conducted toward this end has been predicated on the assumption that deceivers enact a consis-

tent set of primarily nonverbal behaviors that, if only identified, would discriminate deceivers from truth-tellers (see also McCornack, 1997). Contrarily, research has identified only a small number of behaviors that show any consistent association with deception; as we noted above, these behaviors characterize neither every deceiver nor every deception attempt. In this section, we will review those nonverbal behaviors that research has identified as accompanying deception. This is not an exhaustive review. We have not attempted to summarize every single study that has examined deception and nonverbal behavior, nor to include in this review every single nonverbal behavior that has been studied. Instead, our focus has been on those facial, vocalic, and kinesic behaviors that have been the most consistently supported as correlates of deception.

### Facial Behaviors

Many researchers studying deception have focused their experimental efforts on the face, and for good reason. According to the *principle of facial primacy*, people encode more about their emotional states, and decode more about others' emotional states, through facial behaviors than through any other type of behavior (Knapp, 1978). Therefore, to the extent that deception is accompanied by arousal and negative affect, the face and eyes are important potential sources of information about the veracity of a speaker's message. Consequently, it is not surprising that Ekman and Friesen (1974) found deceivers conscientiously manipulating their facial behaviors more than other types of behaviors in order to appear honest.

Two aspects of the face are particularly relevant to deception detection. These are the use of smiling and the behavior of the eyes; in this section, we consider each in turn.

**Smiling.** Smiling is a facial behavior that is stereotypically associated with deception. That is, most people believe that changes in baseline smiling behavior accompany deception attempts (see Burgoon, Buller, & Woodall, 1989, p. 271). An intuitive prediction with respect to smiling might be that people smile less when deceiving because of the negative affect that might accompany a deceptive attempt. On the other hand, one might surmise that the nervousness associated with the fear of detection might cause people to smile more when deceiving, as opposed to truth-telling. Perhaps surprisingly, most studies on deception that have measured smiling have reported no differences between lying and truthfulness in people's tendencies to smile (e.g., Greene et al., 1985; Hocking & Leathers, 1980; Knapp et al., 1974; Kraut, 1978; Kraut & Poe, 1980; McClintock & Hunt, 1975; Mehrabian, 1971a; O'Hair, Cody, & McLaughlin, 1981; Riggio & Friedman, 1983). Although null results are nonfindings and one must exercise extreme caution when

drawing inferences from them, the failure of smiling to demonstrate a significant relationship with deception across a range of experiments would seem to suggest that smiling is not a reliable deception cue. However, Ekman et al. (1988, 1997) warned that such a conclusion would be erroneous. They pointed out that, although most studies have not found significant differences in the amount of smiling people engage in when deceiving or truth-telling, it may still be the case that deceivers and truth-tellers differ in the types of smiling they do.

Specifically, Ekman et al. predicted that truth-tellers are more likely than deceivers to use *felt smiles*, whereas the latter are more likely than the former to use *false smiles*. Ekman and Friesen (1982) had earlier described felt smiles as those that “include all smiles in which the person actually experiences, and presumably would report, a positive emotion” (p. 242). Felt smiles, which are also referred to as Duchenne smiles (in reference to the French anatomist Duchenne de Boulogne), engage both the *zygomaticus major*, which pulls the lip corners upward toward the cheekbones, and the *orbicularis oculi*, which gathers inward the skin around the eye socket. By contrast, false smiles are “deliberately made to convince another person that positive emotion is felt when it isn’t” (Ekman & Friesen, 1982, p. 244). One particular type of false smile is the *masking smile*, which is used when a person is feeling a strong negative emotion but is attempting to conceal that emotion by appearing to feel positive. Like felt smiles, masking smiles engage the *zygomaticus major* but not the *orbicularis oculi*, so the smile itself is present but the gathering of skin at the outside corners of the eyes is not. Moreover, masking smiles are often accompanied by muscle movements related to the negative emotion being experienced (see Ekman, 1985, for a detailed discussion of smile types).

**Eye Behavior.** If the face has primacy as a source of information about emotional states, then the eyes have primacy within the face. Humans spend substantially more time looking at each other’s eyes than at any other parts of the face or body (Janik, Wellens, Goldberg, & DeLosse, 1978). Consequently, much is attributed to the eyes; indeed, they are thought to be the “windows to the soul,” capable of revealing one’s innermost feelings and motives (Webbink, 1986). It is hardly surprising, therefore, that eye behavior is thought by many to be a prime deception cue. Even those who are trained to detect deception as part of their professional work, such as police interrogators, believe that the eyes are the best source of information about whether a speaker is lying or truth-telling (Leathers & Hocking, 1982).

Just how reliable a cue eye behavior actually is, however, appears to depend on which specific behavior is being examined. Perhaps the most commonly investigated is gaze, or eye contact, and the intuitive profile is likely that people engage in less eye contact when deceiving than when truth-

telling. Intuition fails on occasion, however. Although a few studies have found that deceivers engage in briefer eye contact than truth-tellers (e.g., Exline, Thibaut, Hickey, & Gumpert, 1970; Hirsch & Wolf, 2001; Hocking & Leathers, 1980), four meta-analyses of the deception literature have shown no significant association between deception and gaze (DePaulo, Stone, & Lassiter, 1985a; Kraut, 1980; Zuckerman, DePaulo, & Rosenthal, 1981; Zuckerman & Driver, 1985).

One reason why eye contact may be an unreliable deception cue is that it is relatively easy to control. Despite the folk belief that the guilt of lying prevents people from being able to maintain eye contact while deceiving, Ekman's leakage hierarchy suggests that facial behaviors, including eye contact, comprise the least leaky of the nonverbal channels, meaning that individuals are facile at controlling the cues they convey through facial behaviors.

Unlike gaze, however, two other eye behaviors have shown relative reliability as cues to deception: blinking and pupil dilation. Both behaviors are regulatory, meaning that the body engages in them automatically for purposes of controlling bodily needs. Blinking prevents damage to the cornea by maintaining a consistent layer of moisture. In a normal, relaxed state, humans blink approximately 15 to 20 times per minute, or about 15,000 times per day (Andreassi, 2000). When engaged in tasks that require close attention, such as reading, however, the blink rate can drop to as low as 3 times per minute (Tecce, 1992). Conversely, blinking rates rise during periods of negative arousal, such as during nervousness or stress (Tecce, 1992). To the extent that deceptive behavior is associated with such negative affective states, it is logical to predict that people blink more frequently during deception than during truth-telling. Three meta-analyses have demonstrated this exact pattern (DePaulo et al., 1985a; Kraut, 1980; Zuckerman & Driver, 1985).

Pupil dilation is likewise regulatory, functioning to control the amount of light allowed to enter the eye. The pupil is surrounded by iris muscle that causes it to dilate when ambient light is scarce and to contract when it is plentiful. In normal adults, the pupil can dilate to 8 or 9 millimeters, contract to 1.5 millimeters, and can react to a stimulus (such as a change in ambient light) in a fifth of a second (Guyton, 1977; Lowenstein & Loewenfeld, 1962). Other stimuli besides light affect pupil dilation and contraction, including pain (Chapman, Oka, Bradshaw, Jacobson, & Donaldson, 1999), sexual attraction (Hess, 1975), affect (Hess, 1972), sexual arousal (Hamel, 1974; Hess, Seltzer, & Shlien, 1965), general physiological arousal (Goldwater, 1972), and information processing (Beatty, 1982). Due to its relationships with arousal and affect, in particular, pupil dilation also tends to covary with deception. Specifically, pupils dilate more when people deceive than when they speak the



truth, all other things being equal (DePaulo et al., 1985a; Lubow & Fein, 1996; Zuckerman et al., 1981; Zuckerman & Driver, 1985).

In sum, eye behavior does serve as a reliable indicator of deception, but eye contact, in and of itself, does not. If facial behavior, in general, is highly controllable, as Ekman's leakage hierarchy suggests, then why would blinking and pupil dilation be reliable deception cues? For pupil dilation, it is perhaps because, unlike eye contact, humans have almost no control over momentary fluctuations in their pupil diameters. Although this is not the case for blinking—one can certainly exert control over one's blinking rate—the fact that blinking is an automatic regulatory behavior may make people less aware of their blinking rates than they are of the focus of their eye contact. Thus, unlike gaze, pupil dilation may be a reliable cue because it cannot be consciously controlled, and blinking may be a reliable cue because it is not consciously controlled.

In the next section, we move from a relatively controllable nonverbal channel—facial behavior—to one that exhibits greater leakiness—the voice.

### **Vocalic Behaviors**

According to Ekman and Friesen's leakage hierarchy, cues associated with the voice should betray deception better than cues associated with the more controllable face. Indeed, Bauchner, Kaplan, and Miller (1980) found that vocalic behaviors are better indices of deception than are other nonverbal behaviors. Unsurprisingly, vocalic cues have garnered the attention of deception researchers. Although many properties characterize the voice (including tone, rate, quality, amplitude), we will focus our attention in this section on three that have been studied most with respect to deception: pitch, nervousness/stress, and speech errors.

**Pitch.** Several studies have noted that vocalic pitch tends to increase when people deceive. In an early investigation, Ekman, Friesen, and Scherer (1976) analyzed videotaped interviews of student nurses produced in a previous study (Ekman & Friesen, 1974). In each tape, a student nurse watched a short video and was subsequently interviewed regarding her feelings about it. There were two experimental conditions. In the honest condition, participants were shown a pleasant nature film and were instructed to describe their feelings about the film honestly. In the deceptive condition, participants were shown a grotesque film depicting burns and amputations but were instructed to conceal their negative feelings and attempt to convince the interviewer that they had just seen the pleasant nature film. Ekman, Friesen, and Scherer selected two short speech samples from each participant's interview and used an online speech analysis system to determine



the fundamental frequency of the voices. They found that, compared to the participants in the honest condition, those in the deceptive condition had higher vocal pitch.

Ekman and his colleagues expanded this investigation in a later study (Ekman, O'Sullivan, Friesen, & Scherer, 1991) by adding to their original sample of nursing students, replicating the film and interview procedures, and then taking more detailed vocal measures. Unlike in the 1974 study, Ekman et al. (1991) analyzed the complete utterances of the participants to ascertain the fundamental frequency of their voices. Again, they found that pitch was significantly higher in the deceptive condition ( $M = 228$  Hz) than in the honest condition ( $M = 221$  Hz).

**Nervousness and Stress.** Other aspects of the voice have also been identified as being linked to deception. One example is vocal nervousness, which Hocking and Leathers (1980) examined in an experiment involving 16 criminal justice students who were videotaped while giving truthful and deceptive responses to a series of questions. Hocking and Leathers had a group of trained coders rate the participants' voices on their level of vocal nervousness. As anticipated, they found that participants demonstrated greater vocal nervousness while deceiving than while truth-telling.

Potentially related to vocal nervousness is a property of the voice known as vocal stress (O'Hair & Cody, 1987; O'Hair, Cody, & Behnke, 1985; O'Hair, Cody, Wang, & Chao, 1990). Researchers have known for some time that physiological arousal modifies characteristics of the voice (Alpert, Kurtzberg, & Friedhoff, 1963; Hecker, Stevens, von Bismark, & Williams, 1968; Inbar & Eden, 1976; Kuroda, Fujiwara, Okamura, & Utsuki, 1976; Rubenstein, 1966; Smith, 1977), and so it is easy to understand why vocal stress has been a subject of deception research. Vocal stress is defined as an "inaudible roughness in the voice called tremolo" that is produced when psychological stress causes a lack of synchronization between neurological signals and the function of the vocal folds (see Law Enforcement Associates, 1983, p. 2). Although not detectable without instrumentation, vocal stress has been used primarily by law enforcement as a tool (similar to the polygraph) to aid in deception detection. Unlike the polygraph, which can only be used with an interviewee present, vocal stress analysis (VSA) has the advantage of being usable even on tape recordings of a person's voice, enabling law enforcement officials to utilize it with prerecorded interviews as well as live ones. Research has confirmed that VSA reliability indicates the presence of psychological stress and anxiety (see, e.g., Brockway, 1979; Wiegele, 1978a, 1978b).

**Speech Errors.** Finally, several investigations have focused on the frequency of speech errors during deceptive interactions. Although the term speech errors may seem to imply a verbal behavior, the markers that are

typically measured are vocalic but not verbal. These include vocal disfluencies, such as filled pauses (e.g., “um” or “uh”) and false starts, excessively long pauses, and long response latencies (the time lapse between when a question is posed and when the recipient begins to answer it).

To the extent that one’s vocal pattern and fluency might be compromised by the increased anxiety and arousal that often accompanies deception, speech errors would be expected to increase during deceptive episodes. A number of studies have demonstrated this outcome: people make more speech errors when deceiving than when truth-telling (deTurck & Miller, 1985; Feeley & deTurck, 1998; Harrison, Hwalek, Raney, & Fritz, 1978; Heilveil & Muehleman, 1981; Mehrabian, 1971a; Vrij, 1994). deTurck and Miller (1985), for example, found that deceivers took longer pauses, had longer response latencies, and made more verbal errors than did truth-tellers. Mehrabian (1971a) likewise reported deceivers exhibited more speech errors than those who were telling the truth, and that deceivers also had a higher speaking rate, which could likewise be a by-product of increased arousal. Matarazzo, Wiens, Jackson, and Manaugh (1970) found that the topic of conversation had an influence on whether deceivers had shorter or longer response latencies. Others have found that differences in response latencies also vary according to whether the deceptive act is planned or spontaneous. Greene, O’Hair, Cody, and Yen (1985), for instance, reported that, when delivering prepared lies (as opposed to spontaneous ones), deceivers actually had shorter response latencies than did truth-tellers, presumably because they had anticipated the question to be asked and were ready with an answer.

An important caveat about nonverbal behavior and deception worth reiterating here is that vocalic cues such as speech errors are probably the most valuable as deception indices when they can be compared to a speaker’s baseline vocalic behaviors. In other words, it may be most informative not simply to compare deceivers to truth-tellers with respect to their vocalic behaviors, but to compare people’s own behaviors when being honest to their behaviors when being deceptive. To the extent that a person’s normal vocalic pattern is marked by disfluencies, for example, the presence of speech errors in that person’s speech may correspond only weakly to the veracity of his or her message. The same may also be said of those actions described in the next category, kinesic behaviors.

### **Kinesic Behaviors**

Included in this final category are movement-oriented nonverbal behaviors, including gestures, head movements, postural shifts, and foot and leg movements. An intuitive prediction regarding the relationship between de-

ception and kinesic behavior is that people exhibit more body movements when lying than when truth-telling. Such a prediction follows from the observation that deceivers are often nervous about lying. Consequently, it seems reasonable to expect that they will engage in more random movement and self-manipulation behaviors, as these are associated with nervousness (see, e.g., Burgoon, Kelley, Newton, & Keely-Dyreson, 1989; Davis & Hadiks, 1995).

However, as Vrij, Semin, and Bull (1996) observed, most empirical research has supported the counterintuitive notion that deceivers exhibit fewer body movements than do truth-tellers. One explanation for decreased body movement is that deceivers attempt to control their performances by inhibiting nonverbal signals of nervousness, a strategy that can backfire by making deceivers appear rigid or tense (see DePaulo, 1988, 1992). Another is that the cognitive demands of deception do not allow deceivers to pay the same level of attention to their nonverbal behavior as truth-tellers might (Burgoon, Kelley, et al., 1989; Köhnken, 1989).

Indeed, research has demonstrated that people engage in a number of kinesic behaviors more while being honest than while lying. Vrij (1995), for instance, reported that deceivers exhibited fewer hand/finger movements and fewer foot/leg movements than did truth-tellers, whereas Buller and Aune (1987) found that deceivers engaged in fewer forward leans than did truth-tellers, so long as they were attempting to deceive strangers. Ekman, Friesen, and Scherer (1976) likewise indicated that deceivers used fewer illustrator gestures than did truth-tellers, and Greene, O'Hair, Cody, and Yen (1985) reported that deceivers exhibited fewer leg/foot movements than did their truth-telling counterparts, although they also engaged in more head nodding (see also White & Burgoon, 2001; Zuckerman & Driver, 1985).

In an experiment specifically focused on kinesic behavior, Vrij et al. (1996) categorized (by use of factor analysis) movements into three types: subtle movements (which included hand/finger, foot, and leg movements); nervous behavior (which included self-adaptors and postural shifting); and, supportive behavior (which included gestures and head movements, such as nodding or shaking). Of these, only subtle movements discriminated liars from truth-tellers, with liars engaging in fewer subtle movements.

In sum, several nonverbal behaviors show associations with deception, although none is a foolproof cue. Perhaps as a result of this latter fact, many people face frustration when attempting to detect deception from others. A brief summary of those behaviors that have shown reliable associations with deception appears in Table 7.1. In the next section, we address the detection of deception and identify some of the variables that either enhance or inhibit people's abilities in this area.

TABLE 7.1  
Nonverbal Behaviors Reliably Associated With Deception

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*Facial Behaviors*

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Smiling:

Deceivers use more fake smiles than truth-tellers; no difference in overall amount of smiling

Eye behaviors:

Deceivers blink more and have more pupil dilation; no difference with respect to eye contact

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*Vocalic Behaviors*

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Pitch:

Deceivers have higher pitch than truth-tellers

Vocal stress:

Vocal stress and nervousness are elevated during deception

Speech errors:

Deceivers commit more speech errors than do truth-tellers

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*Kinesic Behaviors*

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Deceivers engage in fewer hand/finger movements, fewer foot/leg movements, and fewer illustrative gestures than do truth-tellers

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## DETECTING DECEPTION

One conclusion that has been steadfastly supported in research on deception is that most people fare poorly when attempting to detect it. Accuracy rates reported in research typically range from 55% to 60%—only slightly better than chance (DePaulo & Pfeifer, 1986; deTurck, Harsztrak, Bodhorn, & Texter, 1990; Vrij, 1994). However, these estimates are typically aggregates of two separate forms of detection accuracy: the ability to detect lies, and the ability to detect truths. The issue in the former case is one's accuracy in labeling lies as deceptive (i.e., lie accuracy); in the latter case, it is one's accuracy in labeling truths as truthful (i.e., truth accuracy). A number of investigations have confirmed that people's truth accuracy far exceeds their lie accuracy (e.g., Buller, Strzyzewski, & Hunsaker, 1991; deTurck, Feeley, & Roman, 1997; Feeley & deTurck, 1995, 1997; Millar & Millar, 1997; for review, see Feeley & Young, 1998). Feeley and deTurck (1997), for instance, reported truth accuracy at 83% and lie accuracy at 19%; similarly, Levine, Park, and McCornack (1999) found that truth accuracy scores ranged from approximately 70% to 80%, whereas lie accuracy was in the range of 35% to 40%. Levine et al. (1999) labeled this disparity the veracity effect.

What accounts for humans' anemic overall detection ability and for their relative deficiency in detecting lies? One primary cause is that, in the ab-

sence of evidence to the contrary, people presume that information provided by others is true. This presumption has been dubbed the *truth bias*<sup>7</sup> and it appears to be the result of people's deeply engrained expectations that others will be pleasant, decent, and honest (Buller & Hunsaker, 1995; Buller, Strzyzewski, & Hunsaker, 1991; Grice, 1989; Kalbfleisch, 1992; Kellerman, 1984; Levine & McCornack, 1992; O'Sullivan, Ekman, & Friesen, 1988; Riggio, Tucker, & Throckmorton, 1987; Zuckerman, Fischer, Osmun, Winkler, & Wolfson, 1987). As Buller and Burgoon (1996) opined, relational trust, which is the "foundation on which enduring relationships are built," requires the fundamental belief that one's relational partner is communicating honestly (p. 209).

Why do communicators adopt a truth bias? Gilbert (1991) contended that it is because labeling information as false requires more cognitive energy than labeling it as true. Specifically, he reiterated Spinoza's (1677/1982) original assertion that mental processing patterns default on a truthful assessment of incoming information, and that additional analysis (requiring additional cognitive energy) is required to relabel information as false. As Swann and Giuliano (1987) phrased it, "simply entertaining a belief elevates the perceived informativeness of evidence that may confirm the belief" (p. 522). Gilbert and his colleagues (Gilbert, Krull, & Malone, 1990) designed an ingenious series of experiments to test this proposition. Participants in the first experiment were presented with nonsensical terms and their purported English equivalents (e.g., "A twyrin is a doctor") and were told, following the presentation of each phrase, whether the phrase was true or false. They then took part in an identification test in which they had to respond affirmatively or negatively to questions (e.g., "Is a twyrin a doctor?") that drew on their knowledge from the prior task. One-third of the time, the questions were followed almost immediately by a 500-Hz tone; participants had been instructed that, if they heard this tone, they were to answer the question immediately. Of interest to the researchers was whether the cognitive interruption created by the tone would influence the correct identification of true statements as true and of false statements as false. Gilbert and colleagues proposed that, if the Spinozan hypothesis were valid, identification of false statements as false would suffer but identification of true statements as true would not.

This was precisely the pattern that emerged in the first experiment. Accurate identification of true statements was almost equally likely in tone-interrupted (58%) and uninterrupted (55%) trials; however, accurate identification of false statements was significantly compromised in tone-interrupted

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<sup>7</sup>The truth bias was originally called the *truthfulness bias* (Zuckerman, DePaulo, & Rosenthal, 1981; Zuckerman, Koestner, Colella, & Alton, 1984).

trials (35%), as compared to uninterrupted trials (55%). In the subsequent experiments, participants were instructed either to distinguish genuine from posed facial expressions of joy or to recall facts learned about a fictitious animal. In both experiments, interruptions introduced during the testing phase significantly decreased the accuracy of identifying false statements but had no effect on the accuracy of identifying true statements. These experiments, which employed both verbal and nonverbal stimuli, are supportive of Spinoza's assertion that received information is initially accepted as true and is only later tagged as false if additional cognitive processes (which are compromised by interruption) are engaged. This can explain why aggregate accuracy scores are considerably higher for the detection of truth than for the detection of deceit.

Moreover, identifying information as false does not necessarily imply that the information is deceptive. As we noted above, most definitions of deceit assume a deceptive intention on the part of the sender, such that false information that was inadvertently conveyed as truthful would not qualify as deceit if the sender did not intend to foster a false belief in the recipient (see Miller & Stiff, 1993). In light of Spinoza's hypothesis, this may further compromise one's lie detection accuracy, since cognitive effort is required not only to identify the information as false but, further, to determine whether an intention on the part of the sender to deceive should be inferred.

If baseline detection ability is modest for most people, then what variables are influential in the success or failure of individual deception attempts? Although research has identified a number of such influences, we will focus our attention in this section on some of those that have received the greatest amount of attention, including familiarity, expressiveness and social skill, sex, motivation, suspicion, and interactivity.

### **Relational Familiarity**

The question of whether familiarity advantages or disadvantages deceivers can be addressed with two conflicting lines of thought. On the one hand, one might surmise that deceivers are advantaged when dealing with familiar others because of the level of trust that accompanies an established relationship. Indeed, in positive relationships, familiarity strengthens the truth bias: people have a stronger truth bias for familiar others, such as friends or family members, than for strangers (Buller & Aune, 1987; Buller, Strzyzewski, & Comstock, 1991; Burgoon, Buller, Ebesu, & Rockwell, 1994; McCornack & Parks, 1986). Buller and Hunsaker (1995) also demonstrated that conversational participants who received truthful and deceptive statements from others had a stronger truth bias than did people who merely

observed the conversation. This latter finding appears to reflect a higher level of investment in a conversation that accompanies participating in it rather than simply observing it. This is true, at least, when the relationships are positively valenced. Research indicates that partners in negatively valenced relationships have attenuated truth biases, or may even have lie biases (see McCornack & Levine, 1990).

Investigations of other communication phenomena have shown that people are often more lenient in the way they think about and evaluate conversational partners, as opposed to people they are merely observing (see, e.g., Manusov, Floyd, & Kerssen-Griep, 1997), which may help explain why the truth bias is stronger for participants than for observers. In addition, Burgoon (e.g., Burgoon & Newton, 1991) has offered that, compared to conversational participants, observers tend to orient toward others as objects rather than as people, which further explains the tendency for participants to have a stronger truth bias than observers.

On the other hand, one might predict that deceivers are disadvantaged by relational familiarity because friends and family members have what Buller and Burgoon (1996) referred to as informational and behavioral knowledge.<sup>8</sup> *Informational knowledge* is background knowledge about the deceiver that can be compared to the information a deceiver is communicating. For instance, passing off false information about oneself to a long-time friend may be more difficult than to a stranger, since the friend can compare the false information to his or her own knowledge about the deceiver.

*Behavioral knowledge* is information about a person's typical behavioral patterns. Those who frequently interact with a person ought to be better able than strangers to ascertain departures from his or her normal behavioral routines, which may accompany deceptive efforts (see Brandt, Miller, & Hocking, 1980a, 1980b, 1982). Behavioral knowledge is important because deviations from normative behavioral patterns (including moderately high immediacy, positive affect, vocal fluency, and moderate arousal) tend to arouse suspicion and attributions about deception (Burgoon, Buller, Dillman, & Walther, 1995). Both Ekman and Friesen (1974) and Brandt et al. (1980b) reported that observers who saw a sample of a deceiver's behavior were more successful at detecting deception on subsequent trials than were those who had no familiarity with the deceiver's behavior. Moreover, Bond, Omar, Pitre, Lashley, Skaggs, and Kirk (1992) reported that when people engage in unusual or fishy looking behaviors, observers tend to conclude that they are being deceptive.

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<sup>8</sup>Buller and Burgoon (1996) actually used the terms *behavioral familiarity* and *informational familiarity*. We substitute the term *knowledge* here, to distinguish these variables from overall relational familiarity.



In sum, it is possible to predict either that familiarity helps a deceiver's efforts (because of the increased truth bias) or that it impedes them (because of informational and behavioral knowledge; see Miller, Mongeau, & Sleight, 1986, p. 502). Few investigations have supported either prediction, however. In an interactive experiment, for example, Burgoon and Floyd (2000) found that communicators were more successful at deceiving friends than strangers. That is, relational familiarity acted to reduce detection accuracy. In two earlier experiments, Millar and Millar (1995) reported the same result—that people were better at deceiving familiar others than unfamiliar others—but only when recipients had access to all information channels. When either visual cues (Experiment 1) or auditory cues (Experiment 2) were withheld, deceptive acts became more successful with unfamiliar others (i.e., strangers) than with familiar others (e.g., friends). By contrast, other studies have found no effect of familiarity on deception success or detection accuracy (see, e.g., Comadena, 1982; McCornack & Parks, 1986; Stiff, Kim, & Ramesh, 1992). These results would seem to suggest that the advantages and disadvantages of familiarity may cancel each other out.

Some research has suggested a third possibility, however, which is that the relationship between familiarity and deception success is nonlinear. Bauchner (1980), for instance, reported that friends of a deceiver were more accurate at detecting his or her deception than were strangers—and, they were also more accurate than spouses. Presumably, spouses would have greater informational and behavioral familiarity, and a stronger truth bias, than would friends (who, in turn, would exceed strangers on these characteristics). To the extent that the effects of behavioral/information knowledge and truth bias counteract each other, it is perhaps logical to predict that a moderate level of familiarity advantages receivers' detection abilities relative to either high or low levels of familiarity. The Brandt et al. (1980a) study offers some support for this conjecture. Brandt et al. showed observers a baseline sample of a communicator's behaviors either once, twice, three times, or six times and ascertained the extent to which this exposure made them better able to detect the communicator's deception, as compared to observers in the control condition who were given no baseline information. They found that observers' detection accuracy increased as they were exposed to more baseline information; however, those who got the most baseline information (in the six-exposure, or high familiarity, condition) did no better at detecting deception than those in the control condition.

The true relationship between familiarity and deception success remains somewhat elusive. Of course, it may well depend on factors such as the form of deception being used or the modality through which deceptive messages are conveyed. Consideration of these and other influences will await future empirical attention.



## Expressiveness and Social Skill

Expressiveness refers to the extent to which a person's verbal and/or non-verbal communicative styles can be characterized by others as open and uninhibited, whereas social skill refers more generally to one's ability to control a social situation so that one's particular goals for the interaction are realized. Both have been shown to influence communicators' abilities to deceive successfully. Early studies by Riggio, Tucker, and colleagues have demonstrated that socially skilled speakers have fewer conversational disfluencies than do unskilled speakers (Riggio, Tucker, & Widaman, 1987), and are judged by listeners as being more believable than unskilled speakers, whether they are deceiving or truth-telling (Riggio, Tucker, & Throckmorton, 1987). DePaulo, Blank, Swaim, and Hairfield (1992) also found that dispositionally expressive men were judged by observers as being equally believable whether they were deceiving or telling the truth, but that the deceptions of unexpressive men were considerably more likely to be detected successfully. Burgoon, Buller, and Guerrero (1995) likewise reported that speakers' believability was directly related to their nonverbal expressivity and verbal control skills; however, it was inversely related to their verbal expressivity (see also Brandt et al., 1980b; Burgoon, Buller, Guerrero, & Feldman, 1994; Miller, deTurck, & Kalbfleisch, 1983).

Why should expressiveness and social skill influence speakers' abilities to deceive successfully? According to Buller and Burgoon's (1996) interpersonal deception theory, there are two reasons. First, people with social skill and expressiveness have the ability to be cognizant of, and to control, leakage cues that might otherwise belie their deceptiveness, such as fidgeting or engaging in excessive self-adaptors. As a result, they often appear to have a more fluent and normal conversational style than do people with less social skill and expressivity (Riggio, Tucker, & Widaman, 1987). Second, Buller and Burgoon suggested that social skill and expressivity convey the ability to engage in strategic conversational behaviors designed to enhance credibility. For instance, a socially skilled communicator may be better able than a less skilled counterpart to anticipate a listener's suspicion and to engage in preemptive behaviors, such as using nonspecific language.

## Sex

Sex, or gender, is among the most commonly studied variables in interpersonal communication research. As we note in several other places in this book, men and women differ from each other on numerous nonverbal behaviors.<sup>9</sup> Meta-analytic work on deception research has indicated relatively

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<sup>9</sup>Although the terms *sex* and *gender* are often used interchangeably in social scientific research, they are commonly understood to index different distinctions. Sex typically refers to the

few stable sex differences, however, suggesting that, as Burgoon, Buller, Grandpre, and Kalbfleisch (1998) opined, "in the domain of encoding and decoding deception, men and women have largely achieved parity" (p. 351).

Whether men or women are advantaged in the arena of deception appears to depend on whether one is looking at encoding or decoding processes. Two meta-analyses, conducted by Kalbfleisch (1985) and Zuckerman et al. (1981), have reported that men tend to be more successful than women at encoding deception, although the average effect size is small (mean  $d = .04$  in Zuckerman et al.). Two more recent experiments have indicated that men and women do not differ from each other in how suspicious they look, however (Duncan & Kalbfleisch, 1995; Riggio, Tucker, & Throckmorton, 1987). Other research has indicated that men and women vary little from each other in terms of the actual behaviors used when deceiving. Burgoon, Buller, Grandpre et al. (1998) reviewed the results of three interactive deception experiments (Buller, Burgoon, White, & Ebesu, 1994; Burgoon & Buller, 1994; Burgoon, Buller, Floyd, & Grandpre, 1996) and reported that, across the experiments, sex had few influences on the verbal or nonverbal behaviors of deceivers, and even those effects that were significant tended to account for less than 10% of the variance.

Research has also indicated that the sex composition of a conversation dyad is influential, although findings in this area have been contradictory. Zuckerman et al. reported that both men and women were more successful at encoding deception in opposite-sex interactions than in same-sex interactions (mean  $d = .24$ ). However, two studies by DePaulo and colleagues found just the opposite: deception in same-sex pairs is more successful than in opposite-sex dyads (DePaulo, Stone, & Lassiter, 1985a; DePaulo & Tang, 1994). In her meta-analysis, Kalbfleisch (1985) likewise found that same-sex deception is more successful than opposite-sex deception, but only for men.

With respect to the detection of deception, the empirical results appear on the surface to be more straightforward than for encoding. Two meta-analyses have reported that women are better than men at detecting deception. However, as Kalbfleisch (1985, 1990) indicated, the magnitude of this sex difference depends both on the sex of the deceiver and on the channel richness of the communication modality. In her research, detection accuracy ranged from 50% for men interacting with other men to 80% for women reading conversational transcripts. Zuckerman et al. (1981) likewise found that women exceeded men in their ability to detect deception accurately (mean  $d = .17$ ).

Why might women be better than men at detecting deception? Burgoon, Buller, Grandpre et al. (1998) speculated that women's superiority in detec-

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biological distinction (males vs. females), whereas gender refers to differences in role orientation (masculinity vs. femininity). As we are comparing men and women on their deception abilities here, we use the term *sex* to reference the independent variable.

tion may be part and parcel of their greater social sensitivity and their overall superiority in judging nonverbal communication. They cautioned, however, that women's typical communication style might backfire, at times, when it comes to detecting deception. DePaulo and Rosenthal (1979) suggested that women are more likely than men to assign positive interpretations to messages and may therefore be more likely than men to misinterpret deception cues. Indeed, DePaulo, Epstein, and Wyer (1993) found that women were, indeed, more positive and accommodating than men in their perceptions of others and were, consequently, less accurate in judging sender honesty. Burgoon, Buller, Grandpre et al. (1998) also noted that several experiments have failed to demonstrate sex differences in detection accuracy, including Feeley, deTurck, and Young (1995), Millar and Millar (1995), and Vrij and Semin (1996). Consequently, they cautioned against overinterpretation of a sex difference in deception decoding.

### **Motivation**

A more transient individual influence than expressiveness or sex is an individual's level of motivation to succeed at a specific deceptive attempt. Motivation might be expected to fluctuate widely, according to the gravity of the consequences for being discovered in a lie; when the consequences are grave, one would logically expect the motivation to succeed to be higher than when the consequences are negligible. What effect does motivation have on deception success? An intuitive prediction might be that people are more successful at deceiving if they are highly motivated to succeed than if they are not. Certainly, anecdotal evidence suggests that motivation to succeed (at most anything) will enhance energy and focus toward the accomplishment of a goal. In the area of deception, however, a counterintuitive hypothesis has been proposed: although high motivation will improve a deceiver's verbal performance (i.e., make it more believable), it will actually hinder the deceiver's nonverbal performance, resulting overall in inhibited deception success, rather than enhanced. This hypothesis has been dubbed the *motivation impairment effect* (MIE; for review, see DePaulo & Kirkendol, 1989).

The logic behind the MIE is grounded in Ekman and Friesen's leakage hierarchy, which we discussed earlier in this chapter. As noted, Ekman and Friesen proposed that verbal and nonverbal cues are hierarchically ordered in terms of their controllability, with verbal behaviors being more readily controllable—and thus, less reliable cues to deception—than nonverbal behaviors. The MIE provides that, when deceivers are highly motivated to succeed at deception, they attempt greater control over leakage behaviors than when they are less motivated, and that this attempted control, coupled with the elevated arousal that often accompanies deception, ends

up producing stiff, insincere, and deceptive-looking nonverbal performances that are easily detected by deceivers. As DePaulo and Kirkendol (1989) explained, "The more people deliberately try to control their nonverbal cues, the more out-of-control those cues get" (p. 60).

However, such is the prediction only for nonverbal performance. Because verbal behaviors are thought to be more controllable than nonverbal cues, the MIE provides that motivation will actually improve the verbal performance of deceivers, while simultaneously inhibiting their nonverbal performance. This reasoning leads the MIE to a dual prediction: (a) in situations in which a sender's nonverbal cues are available to a receiver, the lies of highly motivated senders are more readily detected than the lies of less motivated senders; however, (b) if receivers only have access to verbal cues, then the lies of highly motivated senders are less easily detected (DePaulo, Lanier, & Davis, 1983).

Multiple investigations have tested the claims offered by the MIE (DePaulo, Blank, Swaim, & Hairfield, 1992; DePaulo, Kirkendol, Tang, & O'Brien, 1988; DePaulo et al., 1983; DePaulo, LeMay, & Epstein, 1991; DePaulo, Rosenthal, Green, & Rosenkrantz, 1982; DePaulo, Stone, & Lassiter, 1985b; Krauss, 1981). In one of the earliest studies, DePaulo and colleagues (1983) showed either videotapes or transcripts of videotapes of highly motivated and unmotivated liars to participants who were asked to judge the veracity of the liars' statements. Participants in a verbal-only condition saw the transcripts of the videotaped sessions only. Their judgments were compared with those of participants in three other conditions, each of which included some nonverbal cues. Those in a visual-only condition saw the videotaped sessions but could not hear any of the dialogue; those in a verbal+vocal condition could hear the sessions but could not see them; and, those in a verbal+vocal+visual condition could see and hear the sessions. According to the MIE, participants in the verbal-only condition should be disadvantaged compared to those in the other conditions when it came to detecting deception from highly motivated liars. This disadvantage, however, should not extend to unmotivated liars. The prediction was tested using a planned comparison contrasting the veracity judgments of those who read a transcript of a message (the verbal-only channel) with the average of three other conditions. The planned comparison testing this prediction was significant, leading DePaulo et al. to claim support for the MIE. Later studies used similar procedures, although there was variation in the operational definitions of the outcome variable.

Recently, the MIE has drawn focused criticism as hypothesis that lacks both conceptual clarity and (more important) consistent empirical support. In a detailed review, Burgoon (1998) pointed out that the conceptual and operational definitions of both motivation and impairment employed in studies testing the MIE have varied notably, making comparisons across

studies tenuous. She also examined the patterns of empirical findings reported in several investigations of the MIE and noted a number of instances in which (a) predictions based on the MIE failed to appear, and (b) patterns contrary to the logic behind the MIE were evident. With respect to the study by DePaulo et al. (1983), for instance, Burgoon noted that the planned contrast (which was designed as the critical test of the MIE) obscured four important patterns. First, deceptive messages from motivated senders were judged by observers as equally truthful in the verbal-only channel and in the visual-only channel, which is contrary to the hypothesis because the visual-only channel is a nonverbal channel. Second, unmotivated deceivers were judged by observers as being the most truthful in the visual-only channel. This contradicts the logic behind the MIE, since it implies that senders have the ability to control visual cues, more so than verbal cues, to appear truthful. Third, motivated deceivers were no less successful than unmotivated deceivers in the verbal+vocal channel; this contradicts the MIE, which provides that the vocal channel is the leakiest channel (i.e., the most difficult to control). Finally, and most important, Burgoon pointed out that if the means from the four channels are re-arrayed, such that all channels containing verbal information are combined, the resulting comparison indicates that motivated deceivers are more successful than unmotivated deceivers, a conclusion directly contrary to that predicted by the MIE. On the basis of these and similar observations, Burgoon cautioned against the premature reification of the MIE and also warned that, taken to its logical conclusion, the MIE may lead people to see deception in interactions in which it is not present while simultaneously failing to detect deception when it is. On a similar note, Burgoon and Floyd (2000) presented experimental evidence that motivation often enhances (rather than inhibits) nonverbal deceptive performance and that the effects of motivation on performance are often independent of whether deception or truth-telling is occurring. It is likely that the effects of motivation on deceivers' success rates will continue to engender scientific debate for some time.

## Suspicion

Although the truth bias leads people to assume that most information from most sources is true, there are times when receivers experience suspicion about the veracity of a sender's message. Suspicion may be defined as a receiver's conscientious doubt about a sender's truthfulness or honesty (see Buller & Burgoon, 1996). Because experiencing such doubt often causes people to scrutinize a potentially deceptive message—as well as its delivery—with greater vigilance, an intuitive prediction would be that suspicion improves the ability to detect deception (see DePaulo et al., 1980; McCornack & Parks,

1986). We will examine the validity of this prediction later in this section. First, let us address the behaviors that arouse suspicion, and those that convey it from receiver to sender, in interpersonal conversations.

Several investigations have examined the processes through which suspicion is aroused in face-to-face interactions. Assuming that communicators do not enter interactions already suspicious of each other's honesty, it appears that suspicion is elicited primarily through the nonverbal behaviors of the sender. According to Buller and Burgoon's interpersonal deception theory, those behaviors especially likely to trigger suspicion on the part of receivers are those that deviate from a normative pattern (Buller & Burgoon, 1996), and empirical research has borne this out (Bond & Fahey, 1987; Bond et al., 1992; Burgoon, Buller, Guerrero, & Feldman, 1994). In particular, Burgoon (1992) reported that decreased immediacy, vocal pleasantness, and vocal relaxation, and increased nervousness and ambiguity on the part of senders was associated with increased suspicion on the part of receivers. To the extent that these behaviors are associated with suspicion because they are deviations from normal or expected behavior (as IDT posits), it would be reasonable to expect person-specific effects to be operative, as well. For instance, for senders whose typical communication style is nonimmediate and vocally tense, these characteristics should not arouse suspicion on the part of people who know them well (because they are not deviations from those individual senders' baseline behaviors), but may arouse suspicion on the part of strangers (who may be comparing them to social-level behavioral norms).

Not only do sender behaviors appear to trigger suspicion in receivers; receivers' own behaviors tend to shift when they experience suspicion. In other words, receivers leak their suspicion, whether intentionally or not. Burgoon, Buller, Dillman, and Walther (1995), for instance, reported that moderately suspicious receivers displayed increased negative affect and kinesic tension, and that receivers who were highly suspicious had reduced conversational fluency and awkward turn switches. Both suspicious receivers, and their conversational partners, described the receivers' behaviors as non-normative, uncomposed, and undesirable. Similarly, Buller, Strzyzewski, and Comstock (1991) found that suspicious receivers were more disfluent, spoke faster and less clearly, and had longer response latencies than did unsuspecting receivers. Not all behavioral changes associated with suspicion are negatively valenced, however. Burgoon, Buller, Ebesu, Rockwell, and White (1996) found that suspicious receivers were more involved and dominant, and smiled for longer periods of time, than unsuspecting receivers, and their investigation found no evidence of conversational impairment.

As one might expect, behavioral shifts on the part of suspicious receivers can elicit compensatory behavioral changes on the part of senders. Sev-

eral studies, including those by Buller, Strzyzewski, and Comstock (1991), Buller, Strzyzewski, and Hunsaker (1991), Burgoon, Buller, Dillman, et al. (1995), and Burgoon, Buller, Ebesu, et al. (1996), have verified that senders are aware of suspicion when it is present. Such awareness may afford senders the opportunity to alter or repair their conversational behavior so as to appear more credible (see Buller & Burgoon, 1996). This is perhaps evidenced most clearly in the ways that senders respond to probing questions—questions from receivers that elicit further information from senders and can simultaneously convey senders' incredulity. In one of the first studies to investigate the effects of probing questions, Stiff and Miller (1986) found that senders who received negative probes (those that convey a lack of belief) altered their behaviors by blinking and smiling less, using more gestures, and responding to questions more quickly. Stiff and Miller also found that senders who were questioned by suspicious interviewers were judged by observers to be more honest than senders questioned by unsuspecting interviewers, regardless of whether they were lying or truth-telling. The authors reasoned that senders' behavioral shifts in response to suspicion (i.e., negative probes) made those senders appear more honest to observers. Levine and McCornack (1996) later labeled this the *probing effect*.

Subsequent investigations have verified that senders alter their behavior in response to probes. Buller, Comstock, Aune, and Strzyzewski (1989), for example, found that, in the face of perceived suspicion from a receiver, senders exhibited increased speech errors, increased eye contact, and longer response latencies. Buller, Strzyzewski, and Comstock (1991) likewise reported that senders' perception of suspicion was inversely related to their turn lengths, response latencies, speech errors, laughter, vocal pauses, and use of illustrator gestures. On the basis of these and similar findings, Buller and Burgoon (1994) posited what has come to be known as the *behavioral adaptation explanation* (BAE) for the probing effect (see also Buller, Stiff, & Burgoon, 1996; Burgoon, Buller, Ebesu, & Rockwell, 1994; Burgoon & Floyd, 2000). Their contention is that probing, particularly when it conveys suspicion from receiver to sender, prompts the sender to adapt his or her message and nonverbal performance to assuage the receiver's suspicions. In other words, senders who perceive suspicion will correct their performance so as to appear more honest.

Although the BAE is intuitive, its validity has been sharply criticized. In particular, Levine and McCornack (1996, 2001) have argued that, although the logic behind the BAE is sound, a critical examination of the data fails to support it. If, as the BAE predicts, both truth-tellers and deceivers adapt their behaviors when probed, so as to appear more honest, then they should alter behaviors that are stereotypically associated with deception (i.e., those behaviors that research-naïve individuals associate with deception; see Levine & McCornack, 2001, p. 474). However, as Levine and Mc-



Cornack (2001) pointed out, in order for these behavioral shifts to influence actual judgments about veracity, they must involve behaviors that actually do covary with perceived deception (as opposed to behaviors that are only stereotypically, but not empirically, related to judgments of deception). Working from the meta-analysis of Zuckerman et al. (1981), Levine and McCornack identified six behavioral changes that are both stereotypically and empirically associated with perceived deception: increased gaze, decreased postural shifting, decreased response latencies, decreases in vocal hesitations and speech errors, and lowered vocal pitch.

On this basis, Levine and McCornack argued that most of the significant behavioral shifts identified in previous research as being associated with probing were in the direction opposite what the BAE would predict. They proposed an alternative explanation, the *probing heuristic*, which posits that people assume deception to be a cognitively demanding experience (whether accurately or not), and will thus assume that responding deceptively to on-the-spot probing is particularly taxing. Therefore, unless they have the motivation and the ability to scrutinize the merits of a sender's message, people will opt for the cognitive shortcut of assuming that if a sender can respond to unanticipated probes without overt difficulty, then he or she must be telling the truth. The probing heuristic thus predicts that senders who are subjected to probing—regardless of the valence of the probes—will be judged by others as being more honest than those who are not subjected to probing. Furthermore, unlike the BAE, the probing heuristic does not identify the senders' behavioral changes in response to perceived suspicion as the explanatory mechanism for such an outcome.

In a series of experiments, Levine and McCornack (2001) tested the competing claims of the BAE and the probing heuristic. In their first experiment, they demonstrated that probing increased judgments of veracity (relative to not probing), irrespective of senders' post-probe behavioral changes. A second experiment provided equivocal support for the notion that ability and motivation to scrutinize a sender's message moderate the influence of probing on veracity judgments; however, a third experiment provided direct support for this proposition. Participants without specific knowledge and motivation for scrutiny (the heuristic condition) judged probed sources to be more honest than nonprobed sources, regardless of the valence of the probe, whereas participants who were able and motivated to scrutinize the message (the active processing condition) demonstrated no such difference. These effects were independent of any behavioral changes on the part of the senders.

Several conclusions are warranted on the basis of the previous review. First, particular behaviors (many of them nonverbal) on the part of senders show a tendency to elicit suspicion from receivers. Second, receivers often convey their suspicion, both through shifts in their nonverbal behaviors



and through verbal behaviors, such as probing. Third, senders perceive suspicion when it is present; and fourth, they often respond behaviorally to perceived suspicion. Fifth, suspicion, in general, and probing, in particular, affect judgments about a sender's truthfulness, although the mechanism(s) responsible for this relationship are debated. This leads us back to the original assertion, which is the intuitive prediction that suspicion—due to the increased scrutiny it often causes—improves receiver's ability to detect deception accurately.

Perhaps surprisingly, most research has failed to support this assertion. Toris and DePaulo (1984), for instance, found that, although suspicion caused people to judge senders as being less honest, it showed no relationship with actual deception accuracy (see also Stiff, Kim, & Ramesh, 1992). More surprisingly, Burgoon, Buller, Ebesu, and Rockwell (1994) found that, not only did suspicion fail to aid detection ability, it actually impaired it. Burgoon, Buller, Ebesu, White, and Rockwell (1996) opined that the inverse relationship between suspicion and detection accuracy may derive from senders' abilities to adapt their behavior (as the BAE predicts), and/or from what has been termed the *Othello error*; this is the process whereby truth-tellers who are falsely accused of deception respond with signs of affective distress that are mistaken as evidence of deception.

## Interactivity

A common feature of deception experiments has been the use of non-interactive manipulations, wherein the deceptive message is delivered monologically in a written or videotaped format (see, e.g., DePaulo, Kirken-dol, Tang, & O'Brien, 1988; DePaulo et al., 1983; McCornack & Levine, 1990; Miller & Stiff, 1993). As Buller and Burgoon (1996) have argued, however, interactive contexts (such as face-to-face or telephone conversations) may well differ from noninteractive ones in that the former allow for the influence of receivers' behaviors. This observation has prompted the execution of deception studies in which senders and receivers interact in real time (e.g., Burgoon & Buller, 1994; Burgoon, Buller, Floyd et al., 1996; George & Carlson, 1999; White & Burgoon, 2001).

Which format—interactive or noninteractive—affords senders the greatest opportunity to deceive successfully? Two contradictory schools of thought exist on this issue. On one hand, one might argue that noninteractive forms of message delivery (such as writing an e-mail or leaving a message on an answering machine) are best for deceivers because they allow for the greatest control over the message and its delivery. When sending e-mail messages, for instance, senders can carefully select their words for maximal credibility, which should assuage concerns that they will say something unintentionally; at the same time, they can eliminate receivers' access to visual and vocal cues that may belie their deceptive intent. Re-

ceivers are thus left to judge the veracity of messages purely on their verbal content; so, to the extent that the verbal channel is more controllable than nonverbal channels are, one might logically conclude that noninteractive contexts give the advantage to deceivers.

A second school of thought makes the opposite prediction; senders are advantaged in interactive contexts, because of the ability to perceive receiver suspicion and engage in conversational repair behaviors. In a face-to-face conversation, for instance, receivers may have the benefit of access to senders' visual and vocal cues, but senders can likewise watch and listen for any signs of receiver suspicion and can adjust their performances accordingly, so as to allay that suspicion. Moreover, the engaged nature of interactive communication may foster greater levels of mutuality and trust—and may likewise increase the potency of the truth bias—relative to noninteractive contexts. The combination of these processes, therefore, may result in a net benefit to the sender. This is the idea behind the Interactivity Principle (IP) in Buller and Burgoon's (1996) interpersonal deception theory (see also Zuckerman, Amidon, Bishop, & Pomerantz, 1982).

In an experiment designed to test these competing predictions, Burgoon, Buller, and Floyd (2001) compared the detection success of receivers engaged in either monologic or dialogic interactions with senders. Pairs of senders and receivers in the study (who were either friends or strangers) were given a set of questions to discuss. Unbeknownst to receivers, senders had been induced to provide deceptive answers to some of the questions. In the dialogic condition, senders read each question aloud and then both participants discussed the question in a normal, interactive manner. In the monologic condition, however, senders simply read and answered each question aloud, while receivers listened silently. Receivers in both conditions provided judgments about the veracity of senders' answers to each query. Thus, the experiment was designed to determine whether senders' deception was more likely to be detected in the interactive (dialogic) or noninteractive (monologic) format.

As predicted by the IP, the dialogic condition created a greater sense of mutuality than did the monologic condition, but only for strangers (friends may well have had an established level of mutuality that was beyond the influence of any given interaction). More to the point, receivers in the dialogic condition were less successful than their counterparts in the monologic condition at detecting deception when it was present, offering preliminary support to the IP.

However, the study's design created a noninteractive condition that was, indeed, only partially noninteractive. The logic behind the prediction that noninteractive contexts are an advantage to deceivers is that deceivers can exercise maximal control over their verbal messages while simultaneously restricting receivers' access to visual and vocal cues. Similarly, the logic be-

hind the IP's prediction that interactive contexts give an advantage to deceivers is, partly, that deceivers can perceive and adapt to suspicion cues. In the study by Burgoon, Buller, and Floyd, however, receivers had equal access to senders' visual and vocal cues in both the dialogic and monologic conditions. Moreover, to the extent that suspicion cues are conveyed nonverbally (see Burgoon, Buller, Dillman, & Walther, 1995), senders in both conditions had relatively equal opportunity to perceive and adapt to receivers' suspicion cues. Senders in the dialogic condition may have been advantaged in this respect by their access to verbally expressed suspicion, but the important point is that senders in the monologic condition still had the ability to perceive and respond to nonverbally expressed suspicion cues, an ability that is presumed to be lost in truly noninteractive contexts. Consequently, although this study provided an initial test of the competing predictions about the effects of interactivity, additional tests with a truer-to-form noninteractive condition are warranted.

## SUMMARY

Despite strong cross-cultural proscriptions, various forms of deception are common in interpersonal communication. Although deception usually involves some form of verbal behavior, its nonverbal correlates are of import because they can either aid or impede a sender's attempts to deceive and a receiver's attempts to detect deception. Both were relevant in David and Tina's interaction; he attempted to control certain leakage behaviors and she focused on his eye contact as a form of credibility test. The research, however, suggests that Tina might be better able to accurately assess the veracity of David's communication if she focused on a leakier channel, such as his voice or lower body movement, as opposed to his eyes.

Deceivers differ from truth-tellers in terms of physiological arousal, emotional reactions, attempted control, and cognitive strain. When these differences are leaked through nonverbal communication, detection is more likely. Arousal is often leaked through channels that are impossible to observe or difficult to control, such as skin conductance, pupil dilation, and rapid blinking. Emotional reactions, such as nervousness and guilt, are sometimes communicated via vocal stress, increased vocalic pitch, and more speech errors. Deceivers who attempt to control their behaviors may look stiff and unnatural. Finally, when deceivers are under cognitive strain, they may take longer to answer questions and have a harder time controlling their verbal and nonverbal performances. Other cues that are stereotypically associated with deception, such as eye contact and frequency of smiling, fail to discriminate reliably between deceivers and truth-tellers.

Despite identifying a number of behaviors that are associated with deception, researchers acknowledge that there is no magic formula for catching a liar. The same behaviors that emerge during deception can also surface when someone is telling the truth but is nervous or trying to make a good impression. People also react to deception in unique ways based on their communication style. Thus, it is not surprising that the accuracy rate for detecting deception is only about 55% to 60%, with people less likely to be accurate when a person is lying compared to telling the truth. This percentage does not improve within close relationships. Indeed, although relational partners are advantaged by having behavioral and informational knowledge, they are also disadvantaged because they have strong truth biases. Other factors, such as social skills, biological sex, motivation, suspicion, probing, and the interactional versus noninteractional nature of communication may also affect the likelihood of detecting deception.

## Conflict and Disengagement

*David notices that Tina has become really quiet during breakfast. He suspects that her behavior has something to do with Ann, but instead of bringing the issue up, he puts a smile on his face and tries to go on as if nothing is wrong. After breakfast, the couple decides to visit some quaint shops before going on a mule ride down the Canyon. While in one of the shops, David sees Tina looking admiringly at a colorful Southwestern vase and asks her if she'd like him to buy it for her. Tina snaps. "Why are you suddenly offering to buy me things?" she asks in a tight, angry voice. "Is there something you feel guilty about?" David takes a step back, looking very uncomfortable. Then in a quiet voice he replies, "Can't a guy buy his girlfriend a present without having an ulterior motive?" Tina becomes more agitated. "Yes, but you didn't answer my question, did you? Is there something you need to tell me? Maybe something about Ann?" David admits that Ann is his former girlfriend but says that wanting to come to the Grand Canyon had nothing to do with her. In a loud, trembling voice, Tina says she doesn't believe him and tears well up in her eyes. David is embarrassed and quickly leaves the store, telling Tina that now is "not the time or place" to discuss this. "When do you suggest we talk about it then?" Tina asks. "Tonight, if we have to. But it's really not that big of a deal. Let's not let this ruin our day." Tina has had enough. "For your information, the day is already ruined. I don't want to be around you right now, so why don't you go down the Canyon alone. Or better yet, take Ann with you." Tina stomps off, leaving David staring at her.*

When people disagree, the nonverbal cues they use (such as Tina's vocal tones and David's withdrawing behavior) play a critical role in determining whether conflict escalates or is managed successfully. In fact, Canary,

Cupach, and Messman (1995) argued that “subtle forms of nonverbal messages convey mountains of meaning during conflict” (p. 140), and Galvin and Brommel (1986) noted that “If you closely monitor any developing conflict, usually nonverbal cues of conflict appear before verbal ones” (p. 170). Nonverbal cues are also important when people end relationships, especially given research and theory focusing on withdrawal and lack of involvement as signs of relational decline (e.g., Knapp & Vangelisti, 1996). In this chapter, we examine nonverbal behavior associated with conflict and disengagement. The first and much longer section of the chapter focuses on conflict strategies and tactics as well as more general patterns of communication that distinguish happy couples from distressed couples. At the end of the chapter we focus briefly on nonverbal cues that are likely to occur as people move through relational stages heading toward disengagement.

## **DEFINING CONFLICT IN THE CONTEXT OF RELATIONSHIPS**

When people think about the prototypical conflict interaction, they usually imagine an aggressive situation that involves nonverbal expressions such as angry faces, loud voices, and cold stares. However, conflict is not always expressed aggressively. Sometimes people calmly discuss issues of disagreement to collaborate or arrive at a compromise, which ultimately enhances relationship functioning. In contrast to popular belief, research also suggests that conflict can have a positive rather than negative impact on relationships. Gottman (1979) found, for example, that couples who talked about issues of contention tended to be more satisfied than those who minimized or avoided discussing conflict issues. Other scholars have demonstrated that couples who confront conflict constructively can solve relational problems, enhance feelings of closeness, and ultimately make their relationships more stable (e.g., Braiker & Kelley, 1979; Lloyd & Cate, 1985).

The way couples manage conflict is often more important than the conflict itself. For instance, Siegert and Stamp (1994) found that the primary factor discriminating between couples who stayed together versus those who broke up after their “first big fight” was how constructively they communicated during the conflict episode. Those who stayed together reported that the conflict led to increased understanding and confidence that they could solve problems together and would be willing to make sacrifices for each other. Those who broke up reported that the conflict led to confusion and uncertainty about the state of the relationship, as well as worry that future interactions would be tense and uncomfortable.

In line with studies showing that conflict can either enhance or erode relational satisfaction, interpersonal communication scholars have typically

defined conflict in terms of disagreement rather than aggression (e.g., Cahn, 1992; Canary et al., 1995). However, there is little consensus about the precise attributes that define conflict and set it apart from other types of interaction (Weiss & Dehle, 1994). One of the most popularly cited definitions of conflict comes from Hocker and Wilmot (1998), who identified five features of conflict: interdependence, incompatibility, interference, scarcity of resources, and an expressed struggle. According to this definition, conflict occurs between two or more interdependent parties. Because close relationships tend to be characterized by high levels of interdependence, they usually contain relatively high levels of conflict as well as satisfaction (Argyle & Furnham, 1983). Conflict also involves the perception of incompatible goals. In the scenario at the beginning of this chapter, Tina suspected that David's motives for visiting the Grand Canyon were different from hers; she was hoping for some relaxation and romance, but she worried that David was hoping to see an ex-girlfriend. Tina and David's goals for handling the disagreement were also at cross-purposes; she wanted to talk about issues whereas he wanted to avoid conflict. As Tina and David's situation illustrates, incompatibility is most likely to lead to conflict when people perceive that their partner's goals interfere with their own goals (e.g., a vacation cannot be truly romantic if one's partner is thinking of someone else!) and resources are scarce (e.g., Tina values vacation time and thinks it is difficult to find good relationships). For some couples, incompatibility becomes a persistent, defining feature of their relationships (Cahn, 1992). For other couples, incompatibility is resolved or managed without seeping into the fabric of the relationship. Finally, according to Hocker and Wilmot, if incompatibility remains a perception without being expressed, conflict has not really occurred.

Scholars have also conceptualized and operationalized conflict in a number of ways. Cahn (1990) discussed three ways of studying conflict: as a disagreement or argument about a specific issue; as a problem-solving discussion that involves bargaining or compromising; and as a pattern of interaction that discriminates distressed couples from happy couples. Viewed in this light, a conflict strategy (such as compromising or accommodating) could be used during isolated cases of disagreement or problem-solving, or it could become a primary way of interacting across communication episodes. Canary et al. (1995) expanded on Cahn's (1990) reasoning by distinguishing between four types of conflict definitions: nonepisodic/nonspecific, episodic/nonspecific, nonepisodic/specific, and episodic/specific.

When defined as nonepisodic and nonspecific, "conflict is viewed as a fluid phenomenon, permeating different interaction types in many behavioral forms" (Canary et al., 1995, p. 5). Thus, a nonverbal researcher may investigate the types of behaviors that occur across marital interactions be-

tween happy versus distressed couples. Rather than examining a specific episode or type of interaction, these scholars would look at general patterns of interaction within relationships.

In contrast, when researchers define conflict as a particular type of interaction without specifying the behavior that accompanies such interaction, they are adopting an episodic/nonspecific definition. A nonverbal researcher taking this perspective might define conflict in terms of interaction reflecting negative affect and incompatibility, but specific nonverbal behaviors would not be identified. As Canary and colleagues put it, "Conflict-as-episodic definitions may suggest cues, such as negative emotions, to identify conflict interactions more precisely. But these definitions do not necessarily specify *how* people manage conflict behaviorally to evidence their internal battles" (p. 8).

When conflict is defined as nonepisodic but specific, researchers take the opposite tact; rather than looking to episodic features to determine whether a conflict is occurring, they look for specific types of behavior. For example, Bavelas, Rogers, and Millar (1985) defined conflict as occurring when there is a sequence of at least three dominant messages. Other researchers have defined conflict in terms of nonverbal behaviors such as anxiety displays, angry expressions, and defensive posturing (Canary et al., 1995). Although a behavioral approach such as this may be appealing to nonverbal researchers, it is important to recognize that many of these nonverbal cues are present in contexts that do not involve conflict. In addition, Canary and colleagues noted that there is "a lack of consensus about the specific behaviors that define conflict interaction" (p. 9).

The next conceptualization of conflict—as both episodic and specific—involves investigating the communicative behaviors that occur within a particular conflict interaction. Research from this perspective has examined general conflict strategies, (e.g., collaborating, competing) as well as specific behaviors enacted during conflict interaction (e.g., interruptions, loud voices). The key is that these behaviors are studied within the context of a conflict episode; conflict is defined by the characteristics of the interaction rather than by the behavior that occurs within that interaction. Thus, nonverbal researchers might videotape couple conflicts and then code the behaviors partners display.

In the next sections of this chapter, we review research related to three areas of conflict research: conflict strategies, specific conflict behaviors, and general patterns of conflict interaction that distinguish distressed couples from happy (or nondistressed) couples. As such, we touch upon research fitting under Canary et al.'s categories of episodic/specific (conflict strategies and behaviors) and nonepisodic/nonspecific (general patterns of communication).



## CONFLICT STRATEGIES

Conflict strategies refer to “general approaches used to achieve an interaction goal” (Canary et al., 1995, p. 10; see also Newton & Burgoon, 1990b). Some people habitually use a particular strategy across conflict interactions. In this case, their strategy usage could be referred to as a conflict style that is fairly stable and reflects a personal behavioral disposition. However, most people use multiple conflict strategies within a given interaction, with strategy usage varying from conflict to conflict. Researchers have uncovered five basic strategies for managing conflict: competing, collaborating, accommodating, avoiding, and compromising. Although considerable research has been conducted on these strategies within both relational (e.g., Fitzpatrick & Winke, 1979; Klein & Johnson, 1997; Sillars, 1980) and organizational (e.g., Blake & Mouton, 1964; Putnam & Wilson, 1982; Rahim, 1986; Rahim & Bonoma, 1979) contexts, little is known regarding the specific nonverbal behaviors (or tactics) associated with each strategy. As Canary et al. (1995) observed, more research is necessary to “identify precise, microscopic nonverbal conflict behaviors” (p. 140). Nonetheless, research on conflict strategies provides information germane to contextualizing and understanding nonverbal behavior during conflict interaction.

### The Competing Strategy

When people use a competing strategy, they take a direct and uncooperative approach to managing conflict (Blake & Mouton, 1964). The competing strategy has also been called distributive (Sillars, 1980), dominating (Rahim, 1986), controlling (Putnam & Wilson, 1982), and contentious (Klein & Johnson, 1997; Pruitt & Carnevale, 1993). Individuals employ competing strategies in an effort to control the conflict situation, including the communication and outcomes associated with the conflict. In other words, the competing strategy involves engaging in a head-to-head competition with the goal of defeating a partner. For this reason, the competing strategy has been labeled a *maximizing response* to conflict; an individual tries to maximize her or his chances of winning an argument and reaching personal goals, often at the expense of the partner (Papa & Canary, 1995). A number of specific tactics are associated with the competing strategy, including accusations, personal criticism, threats, name-calling, and antagonistic jokes (Hocker & Wilmot, 1998). Thus, it is likely that nonverbal behaviors communicating hostility are associated with this strategy. Newton and Burgoon (1990a) examined nonverbal correlates of verbal strategies during couple disagreements. They found that competing strategies (such as accusations and statements that invalidate a partner’s position) were correlated with a loud/sharp vocal tone, animated gestures, random movement, head shak-

ing, fast vocal rate, high pitch, and verbal fluency. Overall, they concluded that antisocial verbal strategies are accompanied by increased nonverbal activation, tension emanating from negative arousal, and displays of dominance and aggression.

As one might expect, the competing strategy has been shown to be a rather ineffective and inappropriate way of managing conflict in relationships (Canary & Spitzberg, 1987, 1989, 1990; Klein & Johnson, 1997; Pruitt & Carnevale, 1993). People are more likely to use competing strategies when they blame their partner for the problem (Sillars, 1980), which sets up a closed-minded process wherein a person enters the conflict convinced that he or she is right. Competing strategies are also likely to meet with opposition, which creates negative cycles of competitive behavior without any resolution.

### **The Collaborating Strategy**

In contrast to the competing strategy, individuals taking a collaborative approach to conflict management consider both their own needs and the needs of their partners. Thus, the collaborating strategy is a form of direct, cooperative communication (Blake & Mouton, 1964; Kilmann & Thomas, 1977). Also referred to as integrating (Rahim, 1986; Sillars, 1980), solution-oriented (Putnam & Wilson, 1982), or problem solving (Klein & Johnson, 1997; Pruitt & Carnevale, 1993), the collaborating strategy involves working together to find new and creative solutions to problems so that both relational partners are satisfied with the outcome. Papa and Canary (1995) called the collaborating strategy the *optimal response* to conflict. When using this style, people stay open-minded, information is sought and shared freely and without criticism, and relational partners are better able to understand each other's position. Sillars, Coletti, Parry, and Rogers (1982) found a number of nonverbal behaviors to associate with the collaborating (or integrating) strategy. Specifically, integrative conflict strategies were related to longer speaking turns, more overall talk time, slower speech rates, and less gaze aversion. In another study, Newton and Burgoon (1990a) demonstrated that verbal statements related to content validation (i.e., problem solving, describing and explaining issues) are associated with postural relaxation, frequent self-adaptors, a soft/mellow vocal tone, slow speech rate, lack of fluency, and lower/deeper vocal pitch.

Not surprisingly, the collaborating or integrating strategy is perceived as competent and is associated with high levels of relational functioning (Canary & Spitzberg, 1987, 1989, 1990; Guerrero, 1994; Klein & Johnson, 1997; Pruitt & Carnevale, 1993). However, oftentimes it is difficult or even impossible to use the collaborating style. Because conflicts tend to involve negative emotion, people find it hard to remain positive and open-minded. People

also have trouble resisting their natural inclination to retaliate if the partner uses a competitive behavior. Other times, partners cannot find a creative way to manage the conflict issue so that both people end up feeling satisfied with the outcomes. For these reasons, it is probably not surprising that collaborating strategies are used less often than competing or avoiding strategies (Canary et al., 1995; Sillars, 1980).

### **The Accommodating Strategy**

Individuals who deal with conflict by accommodating are engaging in a passive but cooperative form of communication that involves giving in to the other person's goals and desires (Blake & Mouton, 1964; Kilmann & Thomas, 1977). Scholars have also labeled this strategy as obliging (Rahim, 1986) and yielding (Klein & Johnson, 1997; Pruitt & Carnevale, 1993). According to Papa and Canary (1995), the accommodating strategy is a *sufficing response* to conflict because it is adequate and comfortable but does not enable both people to reach their goals. Several behaviors are typical of the accommodating strategy, including trying to please the partner, making sacrifices for the partner, apologizing or making conciliatory statements, and trying to promote harmony (Hocker & Wilmot, 1998). Researchers have not identified specific nonverbal behaviors associated with the accommodating strategy, but it seems likely that behaviors such as smiling and vocal warmth would accompany accommodation. Behaviors such as decreased talk time, reinforcing head nods, and increased eye contact while listening may also reflect the passive nature of this strategy. Indeed, Newton and Burgoon (1990a) investigated nonverbal correlates of supportive statements during couple disagreements. Similar to the accommodating strategy, their category of verbal supportiveness included statements that reinforced the partner's position, conceded to the partner, emphasized commonalities, and accepted responsibility. Verbal statements of supportiveness toward the partner were correlated with direct body orientation, kinesic animation, physical involvement (i.e., involvement and warmth as conveyed by kinesic and proxemic cues), physical cooperation (i.e., body positions showing similarity, equality, and cooperation), vocal involvement, and vocal submissiveness.

The accommodating strategy can have either positive or negative effects on relationships depending upon context (Fitzpatrick & Winke, 1979). Accommodating is an appropriate strategy when one person does not care about an issue as much as another. For instance, Tina may have acquiesced to David's request to go to the Grand Canyon because he seemed to have a stronger preference than she did. However, if people accommodate even when an issue is important to them, they are likely to become dissatisfied over time. In line with this reasoning, Cloven and Roloff (1993) coined a con-

cept called *the chilling effect*. This effect occurs when the less powerful person in a relationship gives in or avoids discussing important issues so the more powerful person will not become upset or aggressive. Cloven and Roloff argued that the chilling effect functions to reinforce power differentials and can erode relational satisfaction over time. Thus, although the accommodating strategy may help promote relational harmony in certain circumstances, it should not be the primary strategy that individuals use across conflict interactions.

### **The Avoiding Strategy**

Like the accommodating strategy, the avoiding strategy is indirect and passive. Unlike the accommodating strategy, however, the avoiding strategy is uncooperative (Blake & Mouton, 1964; Kilmann & Thomas, 1977). This strategy has also been termed nonconfrontation (Putnam & Wilson, 1982), inaction (Klein & Johnson, 1997; Pruitt & Carnevale, 1993), and withdrawal (Hocker & Wilmot, 1998). People using the avoiding strategy refuse to discuss conflict issues in any meaningful way. Tactics associated with the avoiding strategy include denying or minimizing the problem (which David tried to do), making irrelevant remarks, trying to change the topic, leaving the scene, holding a grudge, or giving the silent treatment (Guerrero, 1994; Hocker & Wilmot, 1998). Thus, some tactics falling under the avoiding strategy are passive aggressive and include nonverbal behaviors such as silence and stomping off (as Tina did). Behaviors indicating a lack of involvement, such as decreased eye contact, may also function as avoiding tactics. As Feeney, Noller, Sheehan, and Peterson (1999) stated, “low-involvement behaviors, such as head down, head turn[ed] away, and lack of gaze, reflect a tendency to avoid dealing with relationship issues” (p. 353).

Several studies have demonstrated that people who use the avoiding strategy are typically perceived as inappropriate and ineffective within relational contexts (e.g., Canary & Spitzberg, 1987, 1989, 1990) as well as task-oriented contexts (e.g., Gross & Guerrero, 2000; Gross, Guerrero, & Alberts, 2004). This is why Papa and Canary (1995) labeled the avoiding strategy as a *minimizing response* to conflict. The avoiding strategy minimizes the importance of the conflict and denies relational partners the opportunity to try to resolve—or at least manage—the issues that led to disagreement. Thus, these issues are likely to resurface and create more problems in the future. Some research suggests that competing or demanding conflict strategies are especially likely to be met with avoidance or withdrawal. These demand-withdrawal patterns are generally seen as highly unproductive within relationships (Christensen & Shenk, 1991; Gottman & Levenson, 1988; Noller & White, 1990).

## The Compromising Strategy

Finally, individuals can use a compromising strategy that focuses on meeting the partner half way in an effort to resolve disputes. Compromising is a moderately cooperative and assertive communication strategy that involves giving up some of one's own goals to satisfy some of the partner's needs (Kilmann & Thomas, 1977; Rahim, 1986). As such, the compromising strategy leaves some goals and needs unmet without either partner emerging as the clear or sole victor. Whereas the collaborating strategy involves trying to come up with new and innovative approaches to an issue, the compromising strategy typically involves modifying preexisting plans and solutions. For instance, relational partners may have different ideas about where to go on vacation (as Tina and David did). Rather than coming up with a collaborative solution (e.g., finding a new vacation destination that both individuals prefer over their original choices), they may decide to go to one place this year and the other place next year. Hocker and Wilmot (1998) identified several approaches to compromise, including splitting the difference, appealing to fairness, suggesting a trade-off, and trying to maximize gains while minimizing losses. Scholars have not investigated nonverbal cues related to compromise, although one would expect that behaviors related to engagement (eye contact, smooth turn taking) and pleasantness (smiling) would accompany such a strategy.

Little research has examined the relational consequences of using the compromising strategy. In a study examining perceptions of conflict strategies enacted during a simulated organizational decision-making task, Gross and Guerrero (2000) found the compromising strategy to be perceived as moderately appropriate and effective, although not as competent as the collaborating style. Similarly, Hocker and Wilmot (1998) noted that most people view the compromising style as rational, fair, and efficient. Papa and Canary (1995) did not include compromise in their discussion of conflict strategies, but based on Hocker and Wilmot's reasoning the compromising strategy could be referred to as an *equitable response* to conflict. Indeed, the acceptability and effectiveness of compromise may depend on how fair relational partners believe the outcome is.

## NONVERBAL CONFLICT BEHAVIORS

As the above discussion suggests, scholars know quite a bit about the general types of strategies relational partners employ during conflict interaction. However, scholars know considerably less about the specific nonverbal behaviors that accompany these strategies (Canary et al., 1995). The research that has been conducted suggests that nonverbal cues related to

eight themes—overt hostility/aggression, physical violence, contempt, defensiveness, withdrawal/uninvolvement, problem solving, warmth, and hurt—can be fruitfully studied in relation to conflict interaction (Gottman, 1994; Guerrero & La Valley, in press; Margolin, Burman, & John, 1989).

### **Overt Hostility and Aggression**

Overtly hostile behaviors constitute a form of direct, antisocial communication. Margolin et al. (1989) identified several nonverbal behaviors related to overt hostility, including expressing disapproval and anger through means such as yelling or raising one's voice. As discussed in chapter 5, anger can be communicated in a variety of ways, not all of which are overtly hostile. Aggressive anger displays include giving cold or dirty looks, slamming doors, staring, yelling or screaming, and displaying an angry facial expression (with furrowed brows, narrowed eyes, and clenched lips). Indeed, when Shaver, Schwartz, Kirson, and O'Connor (1987) asked people to describe behaviors associated with anger, most responses fell under one of the following categories: verbal attacks such as yelling and using obscenities, physical attacks such as clenching one's fist, making threatening gestures, and throwing things, or displays of nonverbal disapproval such as stomping, slamming doors, and gritting one's teeth. Weiss's (1993) system for rating marital interaction also includes codes for measuring hostile vocal tone and gestures that communicate disapproval and threat. Smiling with the lips closed may also signal hostility since Feeney et al. (1998) found that wives who were judged to use a demanding conflict style tended to display closed smiles.

Not surprisingly, aggressive expressions of anger are generally associated with negative relational outcomes. Sereno, Welch, and Braaten (1987) compared aggressive, assertive, and passive modes of anger expression. Aggression was judged to be the least satisfying of the three modes of expression. In addition, aggressive expressions were evaluated as less competent and appropriate than passive expressions. Aggressive expressions of anger were evaluated the most favorably when people were perceived to be justifiably angry. Other studies have shown that angry aggression is associated with hostility, relational dissatisfaction, and increased distress (e.g., Kubany, Richard, Bauer, & Muraoka, 1992; Leonard & Roberts, 1998; Tangney et al., 1996). Researchers have also distinguished constructive conflicts from destructive conflicts based on the level of negative affect experienced and the amount of aggressive behavior displayed (Jones, 2000). Serious conflicts involve more emotional activation than do less serious conflicts, but people can experience strong emotions during either constructive or destructive conflict. With destructive conflict, however, negative affect is coupled with aggressive rather than assertive behavior, which often leads to a negative cycle of hostility.

## Physical Violence

Although violence can occur outside of conflict interaction, the strong emotions that people experience during serious disagreements can create a climate conducive to physical aggression. Sugarman and Hotaling (1989) defined physical violence as “physical force or restraint carried out with the intent of causing pain or injury to another” (p. 4). Unfortunately, many close relationships contain violence. Christopher and Lloyd (2000) summarized research on the prevalence of physical violence in romantic relationships. They noted that the lowest estimates come from U.S. crime reports, with approximately 2,100 people killed by intimate partners and another 200,000 injured each year. Of course, these estimates only reflect those instances of violence that are reported to authorities. Survey data provides a second estimate, with results suggesting that around 16% of married couples, 30–35% of heterosexual dating and cohabiting couples, and 11–26% of gay/lesbian couples experience violence during the course of a year. Moreover, around 28% of married couples report that at least one act of violence occurred at some point during their marriage (Christopher & Lloyd, 2000).

Scholars have investigated the types of violent behaviors that occur within relationships. Straus (1979) developed the Conflict Tactics Scale to measure various strategies that family members use to cope with disagreements. His work uncovered three major categories of conflict tactics: reasoning, which involves rational argument and problem solving; verbal aggression, which involves yelling, criticizing, or coercing using words; and violence, which includes threatening and actually engaging in physical attacks. Within the Conflict Tactics Scale, there are items referencing behaviors that are relatively low in severity (e.g., throwing something; pushing, grabbing, or shoving someone; slapping someone), moderate in severity (e.g., kicked, bit, or hit with fist), and high in severity (e.g., beat up; threatened with gun or knife; used knife or gun). Most violence that occurs in marital and dating relationships is relatively low in severity (Cate, Henton, Koval, Christopher, & Lloyd, 1982; Marshall, 1994; Straus, 1979). Table 8.1 provides a look at some of the most common of these behaviors based on an analysis conducted by Marshall (1994). Of course, even so-called mild violence can have devastating effects on relationships (Christopher & Lloyd, 2000).

## Contempt

Contemptuous and patronizing expressions could appropriately be cast under the umbrella of overt hostility. However, we discuss these types of expressions separately because research indicates that they play a particularly strong role in determining patterns of conflict interaction. Margolin et al. (1989) included patronizing communication as a category separate from



TABLE 8.1  
Top 20 Violent and Threatening Behaviors Self-Reported  
to Be Used in Relationships by Men and Women

<i>Violence/Threats by Men Toward Women</i>	<i>Violence/Threats by Women Toward Men</i>
1. Hit/kick wall or furniture (56.5%)	1. Shook finger at partner (60.7%)
2. Shook a finger at the partner (52.7%)	2. Made threatening gestures/faces (48.5%)
3. Made threatening gestures/faces (44.4%)	3. Pushed or shoved (47.2%)
4. Drove dangerously (43.5%)	4. Hit/kick wall or furniture (38.0%)
5. Threw/smashed/broke an object (32.9%)	5. Threw/smashed/broke an object (36.7%)
6. Grabbed suddenly/forcefully (37%)	6. Acted like a bully (29.7%)
7. Acted like a bully (35.7%)	6. Slapped with palm of hand (29.7%)
8. Shook or roughly handled (30.3%)	8. Drove dangerously (28.4%)
9. Held down, pinning in place (29.8%)	9. Grabbed suddenly/forcefully (27.1%)
10. Pushed or shoved (28.8%)	10. Threw object at partner (24.5%)
11. Shook a fist (18.4%)	11. Scratched (23.1%)
12. Spanked (14.4%)	12. Shook a fist (20.5%)
13. Twisted arm (13.0%)	13. Shook or roughly handled (18.3%)
14. Slapped with palm of hand (12.5%)	13. Slapped face or head (18.3%)
15. Threw object at the partner (12.1%)	15. Destroyed something (18.8%)
16. Slapped face or head (12.0%)	16. Bit (17.0%)
17. Destroyed something (11.6%)	17. Kicked (15.3%)
18. Threatened to hurt (9.7%)	18. Punched (14.4%)
19. Pulled hair (9.6%)	19. Pulled hair (13.5%)
20. Bit (9.1%)	20. Threatened to hurt (12.7%)

*Note.* The percentages are based on self-reports among two samples of individuals (not couples) who reported that either they or their partners had used (or threatened to use) violent behavior within their relationship. Adapted from "Physical and Psychological Abuse," by L. L. Marshall, 1994, In *The Dark Side of Interpersonal Communication*, W. R. Cupach and B. H. Spitzberg (Eds.), p. 288, with permission from Lawrence Erlbaum Associates.

overt hostility. Similarly, Gottman (1993) demonstrated that expressions of contempt were better predictors of marital discord than were anger. In fact, according to Gottman, expressions of contempt and disgust are two of the most corrosive conflict behaviors. Disgust is typically communicated by "sounding fed up, sickened, and repulsed" (Gottman, 1994, p. 24). For example, David might tell Tina: "If you keep bringing this up, I'm going to go crazy" with exasperation seeping through his voice. Contempt, which implies superiority, is expressed through "any insult, mockery, or sarcasm or derision, of the other person. It includes disapproval, judgment, derision, disdain, exasperation, mockery, put downs, or communicating that the other person is absurd or incompetent" (Gottman, 1994, p. 24). So when David tells Tina that he is "going to go crazy" if she keeps bringing up a certain issue, she might reply "If you can't figure out why we need to talk about this, you are already crazy."

As noted in chapter 5, researchers have identified a number of nonverbal expressions related to disgust and contempt, such as becoming silent,



looking away from or down at someone, furrowing one's brow, and looking astonished (Margolin et al., 1989; Roseman, Wiest, & Swartz, 1994; Scherer & Wallbott, 1994). In a study examining nonverbal behaviors that cooccur with different verbal messages during conflict interaction, Newton and Burgoon (1990a) demonstrated that invalidating or belittling remarks correlated with kinesic animation, forward lean, and head shaking. Certain forms of touch, such as patting someone on the shoulder, can also be regarded as patronizing or condescending (Lee & Guerrero, 2001). Tone of voice can also communicate disgust or contempt. The patronizing voice often sounds mocking or sarcastic. Senders may also communicate superiority by slowing their pace as if communicating to a child or someone who is unintelligent. Other times, people might talk faster and louder when delivering a message that is invalidating or contemptuous (Newton & Burgoon, 1990a). Gottman (1979, 1994) added that sarcasm can also be communicated by the face or the body. Specifically, Gottman suggested that sarcasm occurs when one's words contradict one's nonverbal behaviors, with the face, voice, or body communicating negative affect. So David might respond to Tina's comment about him already being "crazy" by replying "Oh yeah, I forgot that you are the sanest person in the world" with a wry facial expression and closed body posture.

## **Defensiveness**

Gottman's (1994) research also includes defensiveness as a critical component within conflict interaction. Defensiveness is a common reaction during conflict because people have a natural tendency to defend themselves from personal attacks and face-threatening statements that are levied against them (Gottman, 1994; Margolin et al., 1989). Of course, defensiveness can be minimized by avoiding the expressions of hostility and contempt that trigger one's self-defense mechanisms. Scholars have identified some nonverbal behaviors that are related to defensiveness, including putting one's hands on one's hips, shaking one's head, putting one's arms across one's chest, sitting in a closed position, whining, looking away, and increasing conversational distance (Gamble & Gamble, 2002; Gibb, 1961; Gottman, 1994; Morris, 1977).

Gottman's research suggests that defensive reactions may be particularly likely if a person becomes overwhelmed with emotion. According to Gottman (1994), emotional flooding occurs when people become "surprised, overwhelmed, and disorganized" by their partner's negative behavior, leading to a state of diffused physiological arousal that is often marked by increased heart rate, perspiration, warm temperature, and heightened blood pressure (p. 21). When people experience this type of intense emotional reaction it is difficult to react in a rational, constructive manner. In-

stead people tend to respond based on innate tendencies to defend themselves through either attack or withdrawal.

### **Withdrawal/Lack of Involvement**

As noted previously, avoidance or withdrawal is a common reaction during conflict interaction. In fact, some scholars have noted that avoiding strategies are employed more often than competing or cooperative strategies (e.g., Canary et al., 1995; Sillars, 1980). Although leaving the scene and refusing to discuss a conflict issue may be the most obvious avoidant tactics, a number of more subtle nonverbal cues convey withdrawal and noninvolvement. In a study designed to identify nonverbal behaviors used by individuals who were rated as especially withdrawing (or demanding) during conflict interaction, Feeney et al. (1999) found withdrawing husbands to use less gaze, fewer open gestures, more head down positions, and more head turns. Sillars et al. (1982) found that people using an avoidant style displayed more adaptors, and Weiss (1993) included behaviors such as physically pulling away from someone and not talking as withdrawal tactics in his marital interaction coding system. Other behaviors signaling disinterest or a lack of involvement include reduced touch, indirect body orientation, backward lean, and less facial and vocal expressiveness (Andersen, 1985; Coker & Burgoon, 1987; Patterson, 1983).

These types of withdrawal behaviors may serve as markers that indicate a conflict, or even the relationship itself, is in danger of becoming increasingly destructive and unsustainable. In Gottman's (1994) cascade model, which is commonly referred to as the model of the "four horsemen of the Apocalypse," *stonewalling* (a form of withdrawal) is the final step toward relational decline. Specifically, based on observational data from couples, Gottman (1994) concluded that couples who are heading for divorce tend to exhibit the following patterned sequence during conflict episodes: "complaining and criticizing leads to contempt, which leads to defensiveness, which leads to listener withdrawal from interaction (stonewalling)" (p. 110). Gottman (1994) referred to these four elements—criticism, contempt, defensiveness, and stonewalling—as the aforementioned "four horsemen." Stonewalling occurs when partners withdraw from the conflict, stop listening to one another, and exhibit signs of noninvolvement and disinterest.

### **Problem Solving**

In direct contrast to stonewalling, couples can engage in problem-solving behaviors that are cooperative and focus on generating solutions (Margolin et al., 1989). Increased talk time, longer speaking turns, slower speech, and less interruptions are all likely to facilitate problem solving (Sillars et al.,

1982). Feeney et al. (1999) suggested that high involvement behavior such as “increased gaze, more facial expressiveness, more gestures, and more head nods” express an individual’s willingness to try and work agreeably with a partner (p. 353). Similarly, Newton and Burgoon (1990a) demonstrated that people who used problem-solving verbal strategies (termed content-validation) tended to display “a relatively relaxed postural and vocal pattern” along with some nonfluencies and self-adaptors (p. 98). They suggested that nonfluencies and adaptors could reflect either anxiety or the cognitive effort a person exerts when trying to be more “diplomatic and nonconfrontative” (p. 98).

Problem solving may also be associated with other behaviors that signal involvement, such as forward lean, vocal interest, smooth turn-taking, and nonaggressive forms of touch (Coker & Burgoon, 1987). Such behaviors show that a person is attentive and interested in the conversation at hand. People who use nonverbal involvement (or immediacy) cues such as these are typically perceived as more likable (Andersen, 1985), supportive (Jones & Guerrero, 2001; Trees, 2000, 2002), polite (Trees & Manusov, 1998), and persuasive (Burgoon, Birk, & Pfau, 1990), which can ultimately lead to an atmosphere that promotes effective problem solving.

## Warmth

Of course, if nonverbal involvement cues are accompanied by negative affect, they are much less likely to associate with positive outcomes. Thus, communicating warmth or positive affect is essential for creating a pro-social climate during conflict interaction. Andersen and Guerrero (1998a) defined interpersonal warmth as “part of a cluster of thoughts, feelings, and behaviors that comprise concepts such as intimacy and attachment” (p. 305). Interpersonal warmth is related to experiencing positive affect and feeling connected to someone. On the surface, it might seem as if conflict interaction, by its very nature, discourages feelings and behaviors related to interpersonal warmth. However, several scholars have incorporated warmth within their typologies of conflict behavior. For instance, the work by Margolin et al. (1989) includes categories for both problem solving (which focuses on engaging the issue in a constructive fashion) and warmth (which focuses on communicating positive affect and affection). Weiss’s (1993) Marital Interaction Coding System, which has been used as a tool for rating communication during disagreements, includes codes for smiles and laughter as well as affectionate touch. Other nonverbal behaviors indicative of positive affect and interpersonal warmth include vocal warmth, affirmative head nods, bodily relaxation, and reinforcing vocal interjections such as “uh-huh” and “mm-hmm” (Andersen & Guerrero, 1998a).

Interpersonal warmth is also related to concepts such as confirmation and validation (Andersen & Guerrero, 1998a), which are especially important with the context of conflict interaction. Confirming communication acknowledges and endorses the feelings of one's partner (Cissna & Sieburg, 1981). Showing empathy through nonverbal facial expressions, nodding one's head, or otherwise showing agreement are important forms of confirmation. Gottman's research also points to the importance of validation within conflict situations (e.g., Gottman, 1994; Gottman, Notarius, Gonso, & Markman, 1976). Validation occurs when an individual believes that a relational partner understands what he or she is experiencing and thinks those feelings are reasonable. Because validation is the opposite of contempt or criticism (validation conveys acceptance rather than judgment or superiority), validating messages help alleviate some of the negative affect that typically accompanies disagreements. Indeed, Gottman's (1994) research demonstrates that during conflict interaction, couples in happy relationships engage in more positive, validating statements than personal complaints or criticisms. The reverse is true for those in dissatisfying relationships, with negative statements outweighing positive statements. Similarly, satisfied couples exhibit more nonverbal communication reflecting interpersonal warmth than hostility (Feeney, Noller, & Roberts, 1998).

## Hurt

Validation is also important because feeling hurt is often a cause or a consequence of conflict (Guerrero & La Valley, *in press*). For example, Metts (1994) identified several common relational transgressions, including having sex with someone outside of the primary relationship, wanting to or actually dating others, deceiving the partner, or being emotionally involved with or attracted to a third party. Relational transgressions, which occur when people break implicit or explicit relational rules, typically lead to feelings of betrayal, hurt, and despair. Transgressions can also lead to conflict, as is the case in our example of David and Tina (i.e., Tina is upset because she believes David is still attracted to his ex-girlfriend, and, moreover, deceived her about his reasons for wanting to go to the Grand Canyon). Within the context of conflict interaction, being verbally attacked or criticized by one's partner can also lead to feelings of hurt and despair (Canary, Spitzberg, & Semic, 1998; Gottman, 1994). Margolin et al.'s (1989) work, which includes a category called despair, also suggests that hurt feelings are often integral to the conflict experience, as does Weiss's (1993) *Martial Interaction Coding System*, which includes displays of dysphoric affect (such as expressing sadness, pouting, and talking in a whiny voice).

People express hurt feelings in a variety of ways. Vangelisti and Crumley (1998) examined responses to hurtful messages. They identified three com-

mon responses: active verbal responses such as being verbally aggressive, defending the self, and making sarcastic comments; acquiescent responses, such as crying, conceding, and apologizing; and invulnerable responses, such as ignoring the problem, becoming quiet, and laughing it off. Nonverbal behavior is likely to be imbedded in these three responses. Indeed, tone of voice (as reflected in sarcasm) is mentioned as a form of active verbal response. In another study, Bachman and Guerrero (2003) investigated a number of other responses to hurtful events that can involve nonverbal communication, including relational repair tactics (e.g., David sends Tina flowers), active distancing (e.g., Tina gives David the silent treatment), and vengeful behavior (e.g., Tina starts talking about an old boyfriend to get David jealous), among others. These studies suggest that people may use an assortment of nonverbal behaviors in response to feeling hurt during and after conflict episodes.

## COMMUNICATION PATTERNS

In addition to examining specific strategies and behaviors associated with conflict, scholars have uncovered general patterns of communication that distinguish happy couples from distressed or violent couples. Not surprisingly, happy couples express more positive affect and cooperation than distressed couples, whereas distressed couples display more negative affect, aggression, and avoidance. Distressed, and especially violent couples, get caught in destructive patterns of negative reciprocity and demand-withdrawal sequences more often than happy couples.

### Positive Versus Negative Affect

Gottman and his colleagues were among the first to analyze nonverbal behaviors during marital conflict to determine how expressions of positive and negative affect associate with relational satisfaction. In an initial study by Gottman, Markman, and Notarius (1977), facial cues such as smiling, displaying an empathic facial expression, and nodding to show agreement were coded as nonverbal expressions of positive affect, whereas facial cues such as frowning, sneering, crying, or looking angry were coded as expressions of negative affect. Gottman et al. (1977) demonstrated that nonverbal indicators of affect predicted marital satisfaction better than verbal communication. Distressed couples were more likely to express negative affect and to reciprocate their partner's negative nonverbal communication than were happy couples.

In a follow-up longitudinal study, Gottman, Levenson, and Woodin (2001) investigated how facial expressions of discrete emotions affect relational

outcomes. During an initial data collection, participants' facial expressions were recorded and then coded. Four years later Gottman and his colleagues collected data on a number of outcomes, including the degree of fondness individuals felt for their partners, the degree of negativity present in the relationship, and the extent to which individuals identified themselves as a couple, which Gottman and colleagues termed *we-ness*.

Results showed significant longitudinal effects for the facial expressions coded four years earlier. Both husbands and wives were less likely to report being fond of their spouse if the husband had displayed facial expressions of sadness. Wives were more likely to report fondness for their husbands when they had displayed facial expressions of unmet unhappiness (e.g., they had acted happy even though they were not), suggesting that wives' ability to cover up negative emotions may be an important predictor of marital satisfaction. Husbands' facial expressions of fear and sadness were associated with more negativity (as reported by both the husband and wife) in the relationship four years later, and wives' facial expressions of disgust also associated with wives' own reports of negativity in the relationship. Thus, expressions of negative emotions such as sadness, fear, and disgust may become habitual in a relationship, which could lead to less satisfaction, or such expressions could evolve as symptoms of larger relational problems. Finally, both husbands and wives were more likely to report feeling a strong relational identity (or a sense of *we-ness*) if the husband had not expressed much sadness four years earlier. Overall, Gottman et al. (2001) concluded that facial expressions of "anger, disgust, contempt, sadness, and fear, and the distinction between unmet happiness and Duchenne [real] smiles" appear to be important in predicting relational outcomes (p. 56).

Other studies have also overwhelmingly demonstrated that nonverbal expressions of negative affect are more common in distressed relationships, whereas nonverbal expressions of positive affect are more common in happy relationships (see Kelly, Fincham, & Beach, 2003 for a review). Specifically, distressed couples tend to express more hostility and displeasure (Roberts & Krokoff, 1990) during conflict interaction than do happy couples. In contrast, happy couples tend to express more agreement and affection (Revenstorf, Hahlweg, Schindler, & Vogel, 1984; Schaap, 1984) during disagreements. Research also suggests that the subjective experience of affect during conflict predicts current and later marital satisfaction. Specifically, Levenson and colleagues found that people who reported more positive affect and less negative affect were more likely to be satisfied with their marriages at the time the conflict occurred (Levenson, Carstensen, & Gottman, 1994; Levenson & Gottman, 1983), as well as three years later (Levenson & Gottman, 1985). Gottman's (1994) research suggests that the sheer amount of negativity or positivity is not as important as the ratio between how

much positive versus negative affect is expressed. Happy relationships are marked by a ratio of about five positive expressions for every one negative expression. On the other hand, unstable or distressed relationships are marked by ratios of about 0.8 to 1, such that positive expressions are used a little less often than negative expressions.

### **Aggressive, Avoidant, and Cooperative Behavior**

Couples have also been distinguished from one another based on the degree to which they use aggressive, avoidant (withdrawing), or cooperative behavior during conflict interaction. In a longitudinal study of newlywed couples, Noller, Feeney, Bonnell, and Callan (1994) found that satisfied couples used less aggressive behavior (coercion, manipulation, and threats), as well as less withdrawal, than dissatisfied couples. Moreover, relational satisfaction and conflict management appeared to share a reciprocal causal relationship; conflict strategies predicted later satisfaction for wives, whereas satisfaction predicted later conflict strategies for both husbands and wives. In a study by Margolin et al. (1989), four types of couples—physically aggressive, verbally aggressive, withdrawing, and nondistressed—were videotaped while reacting to a typical conflict. Physically aggressive couples showed more hostility than the other couples, whereas nondistressed couples used more strategies related to warmth and problem solving. Physically aggressive husbands also showed less involvement and more coldness and defensiveness than did verbally aggressive or withdrawn husbands. Other research also suggests that individuals in physically violent relationships are more likely to engage in behaviors reflecting hostility, contempt, and defensiveness (Christopher & Lloyd, 2000).

Social skills deficits appear to separate physically violent and verbally aggressive couples from nondistressed couples. Infante and his colleagues have argued that people who are unskilled at negotiation and problem solving are more likely to resort to verbal aggression or violence as a means of controlling interaction (Infante, Chandler, & Rudd, 1989; Infante, Sabourin, Rudd, & Shannon, 1990). These researchers have distinguished between conflict behavior that is argumentative versus verbally aggressive. Argumentative behavior focuses on logical argument and reasoning, including engaging in conflict by directly confronting the issue, taking a position, and backing up one's arguments. Verbal aggressiveness, on the other hand, involves hurting the partner by attacking her or his self-concept through behaviors such as teasing, criticizing, or threatening (Infante, 1987; Infante et al., 1990). In line with the idea that people who are unskilled in argumentation resort to more aggressive behavior, studies have shown that argumentativeness and aggression are negatively correlated, and that individuals in violent marriages tend to report higher levels of verbal aggression



and lower levels of argumentativeness than those in nonviolent marriages (Infante et al., 1989, 1990). So far, however, research on argumentativeness and verbal aggression has been limited to pen-and-paper reports. Observational studies would likely uncover a number of nonverbal correlates for argumentative and verbally aggressive behavior, especially since Newton and Burgoon (1990a) found connections between verbal and nonverbal conflict tactics. Argumentativeness may be correlated with nonverbal behaviors such as extended talk time, more gaze, and smoother turn-taking (all of which are related to problem solving), whereas verbal aggressiveness may be correlated with nonverbal behaviors reflecting hostility, contempt, and defensiveness, as well as violence. Work by other researchers also suggests that violent individuals are less socially skilled than nonviolent individuals. In their review of literature, Christopher and Lloyd (2000) concluded that “partners in violent–distressed marriages demonstrate both general and marital processing skill deficits that contribute to problem-solving difficulties” (p. 335).

### **Negative Spirals**

A lack of social skill may promote spirals of negativity during conflict interaction. Compared to happy couples, distressed couples are more likely to display negative spirals, such as responding to hostility with contempt or countering criticism with accusations or defensiveness (Billings, 1979; Gottman, 1994; Margolin & Wampold, 1981; Pike & Sillars, 1985). This pattern is evident in naturalistic observations as well as in experiments where the level of hostility or coldness that one partner exhibits is manipulated. For example, Feeney et al. (1999) showed that: “Even when individuals were primed to act in a cold and distant manner toward their partners, those in more satisfying relationships were less likely to engage in avoidant behaviors such as turning and moving away from [the] partner, and a lack of eye contact” (p. 356). Distressed couples are also more likely to engage in prolonged patterns of negative reciprocity, with attack–attack or attack–defend sequences proceeding uninterrupted for up to 10 speaking turns (Ting-Toomey, 1983). These negative spirals escalate conflict so that people become emotionally flooded (Gottman, 1994) and find it difficult to engage in more socially skilled, constructive communication (Lloyd, 1990; Sillars & Wilmot, 1994). Violent couples are especially likely to display high levels of hostility and negative reciprocity during conflict (Burman, John, & Margolin, 1992; Burman, Margolin, & John, 1993; Cordova, Jacobson, Gottman, Rushe, & Cox, 1993).

The inability to decode neutral or positive affect correctly may contribute to negative spirals. Gaelick et al. (1985) found that individuals were likely to reciprocate affectionate or hostile emotion during conflict epi-



sodes depending on the emotion they decoded their partner as expressing. However, people accurately decoded hostile emotion more often than affectionate emotion, which led to more negative reciprocity. Noller's research suggests that partners in distressed relationships may have more trouble accurately decoding one another's emotions and intentions than people in happy relationships. Moreover, those in distressed relationships (especially husbands) tend to attribute more negative affect to neutral messages than do those in happy relationships (Noller, 1980; Noller & Ruzzene, 1991). When people decode a sender's message as more hostile than it was intended, they are likely to respond with either aggression or withdrawal.

The demand-withdrawal sequence is another common pattern within conflict interaction (Christensen, 1988). This sequence occurs when one partner wants to discuss a conflict issue (similar to Tina), but the other partner wishes to avoid the issue (similar to David). The person who wants to discuss the conflict issue is likely to become aggravated when the partner withdraws and to push harder to discuss the issue. But the more the demander pushes, the more the withdrawer tries to avoid confrontation. Considerable research has demonstrated that although the demand-withdrawal sequence occurs fairly regularly even within satisfied relationships, it is likely to occur more often and for longer periods of time within distressed relationships (Christensen, 1988; Christensen & Heavey, 1990; Christensen & Shenk, 1991; Heavey, Christensen, & Malamuth, 1995; Heavey, Layne, & Christensen, 1993; Noller & White, 1990; Noller, Feeney, Bonnell, & Callan, 1994). Women are more likely to be in the demanding position, whereas men are more likely to be in the withdrawing position, however when men choose a conflict issue that involves wanting to seek compliance from or change their partner, this sex difference either vanishes or is reduced (Christensen & Heavey, 1990; Heavey et al., 1993, 1995; Sagrestano, Heavey, & Christensen, 1998; Vogel & Karney, 2002). Thus, women may be in the role of wanting to talk about relational issues and problems more than men, making them more likely to be in the demanding role. As Vogel and Karney (2002) concluded, "sex differences in demand and withdrawal behaviors may be a result of the different kinds of problems faced by males and females in close relationships, rather than from any intrinsic differences in their abilities" (p. 699).

## RELATIONSHIP DISENGAGEMENT

Couples whose conflict interactions are marked by patterns such as the demand-withdrawal sequence, negative reciprocity, or Gottman's four horsemen of the Apocalypse (criticism/contempt/defensiveness/stonewalling) are more likely than couples who use constructive communication to expe-

rience low levels of relational satisfaction and, eventually, to de-escalate or terminate their relationships (e.g., Gottman, 1994). Therefore, the nonverbal behaviors partners display during conflict interaction provide one clue to a relationship's stability. As Leonard and Roberts (1998) stated: "Marital conflict and its successful resolution, particularly in early marriage, are viewed as fundamental to the development of a stable, intimate marriage" (p. 45). Even so, it is important to acknowledge that some couples stay together and work through problems even after getting caught in negative spirals of conflict interaction.

The remainder of this chapter focuses on those couples who decide to disengage from their relationships. Aside from the scholarship examining how conflict patterns associate with divorce or relational stability, very little research directly addresses the role that nonverbal communication plays in the disengagement process. Thus, this section is shorter and more speculative than the rest of this chapter. Nonetheless, we believe that nonverbal cues may be instrumental in accomplishing relational disengagement and in minimizing the emotional stress associated with breakups.

### **The Disengagement Process**

Although some relationships end suddenly following a critical incident, such as infidelity, an especially nasty argument, physical violence, or one partner falling in love with someone else (e.g., Baxter, 1984b), other relationships end more gradually. Knapp and Vangelisti (1996) and Duck (1982, 1988) have offered descriptions of the stages (or phrases) that many couples go through as they head toward relational breakup. Couples can skip stages or go through stages in different orders, so these descriptions can be thought of as blueprints that sketch out a fairly normative (yet malleable) model of the disengagement process.

Knapp and Vangelisti's (1996) model of disengagement has been referred to as the reversal hypothesis. According to this model, disengaging from a relationship involves communication that is the opposite of that which helped people build their relationship. Escalating relationships involve increasingly in-depth self-disclosure and affectionate communication. Thus, relationship de-escalation is theorized to involve a return to superficial communication as well as less affectionate (and more avoidant) behavior.

The first stage in Knapp and Vangelisti's model is called *differentiating*. During this stage, relational partners emphasize their differences over their similarities, and their uniqueness as individuals over their relational identity. Many couples differentiate without moving toward disengagement, but when people stay in this stage for an extended period of time or when individuality is embraced to the extent that the relational identity is ignored, the couple could be headed for breakup. Although Knapp and Vangelisti do

not specify nonverbal behaviors that characterize this stage, it is reasonable to expect that partners would use more withdrawal behaviors, less validating cues (such as affirmative head nods), and less tie-signs (such as hold hands) during this stage.

Avoidant nonverbal behaviors are also likely to be prominent within the other four stages of Knapp and Vangelisti's model. The second stage, *circumscribing*, is marked by superficial communication that is restricted to particular topics. Partners avoid getting into any real depth when self-disclosing. Nonverbal cues during this stage may also be restricted, with less emotion and affection expressed. During the third stage, *stagnating*, communication comes to a standstill. Relational partners often see communication as uncomfortable and pointless, so they stop talking. The fourth stage, *avoiding*, is characterized by physical separation. Cohabiting or married partners may stop living together. Dating couples may avoid going to places where they might see one another. Finally, the *terminating* stage occurs when couples end the relationship. Clearly, these four stages are likely to involve withdrawal behavior (e.g., less eye contact, reduced talk time, larger conversational distances), as well as less affectionate nonverbal communication (e.g., less smiling and touch). Research is needed to determine whether a particular pattern of increased withdrawal and decreased affection accompanies these stages.

Duck's (1982, 1988) model of relational dissolution focuses more broadly on the communication patterns that occur both within the dyad and within a couple's social network as they move toward ending their relationship. The process begins with an assessment that the relationship is dissatisfying, which leads into the *intrapsychic phase*. During the intrapsychic phase, Duck theorizes that people take stock of their relationship by weighing costs and rewards and sorting through their feelings. Sometimes individuals reevaluate their relationships as beneficial and feel satisfied once again, but other times they feel justified in either withdrawing from the relationship or demanding change. Although the intrapsychic phase is largely a cognitive stage, the nonverbal behaviors that lead people to feel dissatisfied and enter this phase could be investigated. Some of the same interaction patterns that produce negative feelings during conflict could prompt people to begin this process of relational assessment.

The *dyadic phase* is the second stage in Duck's model. At this point, relational partners communicate (or avoid communicating) their thoughts and feelings to one another. Some couples engage in conflict, which could include problem solving or aggressive communication, whereas others withdraw. Obviously, the dyadic phase could involve many different types of communication over a period of time. When communication fails to improve the relationship, couples are likely to move into the next phase. The research on conflict, which we reviewed earlier in this chapter, may pro-

vide further specificity in terms of the types of behaviors that are likely to propel a couple into phase three—the social phase.

In the *social phase*, people begin talking to individuals in their social network about the relationship. They are likely to complain to friends and family about the partner, seek emotional support, and look for assurance that breaking up is the right course of action. Thus, nonverbal cues related to comfort and empathy as well as emotional expression (see chap. 5, this volume) may be important during this phase. Individuals who receive better emotional support (in terms of both verbal and nonverbal communication) may have an advantage when it comes to coping with relational breakup. Receiving effective emotional support is also likely to be crucial when couples reach the final phase of the disengagement process—the *grave dressing phase* (Duck, 1982, 1988). When the relationship ends, individuals often need time to heal emotionally, to realign their social networks, and to construct a story that helps them save face and justify the breakup.

### **Disengagement Strategies**

Researchers have identified several common strategies that people use to terminate relationships. However, little work has addressed specific nonverbal cues related to these strategies. This is surprising since many people use indirect communication to end their relationships. Three indirect strategies in particular appear likely to involve nonverbal communication—avoidance, withdrawal of social support, and cost escalation.

Avoidance is the most frequently reported disengagement strategy (Baxter, 1984b; Cody, 1982; Perras & Lustig, 1982). Sometimes individuals completely detach themselves from their partners; other times they decrease contact (Baxter, 1979a). More subtle withdrawal behaviors, such as decreased eye contact, larger conversational distances, and less affectionate touch may also be related to the avoidance strategy. Studies suggest that avoidance may prolong the breakup because receivers do not always realize that the sender wants to end the relationship (Baxter & Philpott, 1980). Moreover, avoidant strategies often result in a lack of closure, which can lead to more emotional distress for a receiver (Metts, 1997).

Withdrawing social support is another common disengagement strategy, especially among couples who have been together less than two years (Baxter, 1979b). Because people expect relational partners to be there for them when they need advice or comfort, withdrawing such support can provide an indirect yet powerful clue that an individual is no longer interested in having a close relationship. When senders use nonverbal immediacy cues, such as eye contact, close conversational distances, smiling, and positive forms of touch, receivers perceive them as providing effective emotional support (Jones & Guerrero, 2001; Trees, 2002). Thus, using non-

immediacy cues, such as decreased eye contact, far distancing, and facial unpleasantness may send the message that a sender is unconcerned and no longer desires to maintain a close relationship.

Another indirect strategy, cost escalation, involves deliberately engaging in behavior that will increase costs for the partner (Baxter, 1984b; Thieme & Rouse, 1991). So if Tina decided she wanted to break up with David, she might act especially obnoxious, rude, or disloyal so that he would also want to end the relationship. In fact, people who use cost escalation often do so because they want the partner to be the one who verbally calls for the relationship to end. Nonverbal communication is likely to be instrumental when individuals use cost escalation. Behaviors reflecting hostility, contempt, and even violence could be used in conjunction with such a strategy. In some cases cost escalation can be effective in reducing the receiver's emotional distress following the breakup. After all, if cost escalation works, the receiver will dislike the partner and want to exit the relationship. The receiver may also believe that he or she initiated the breakup rather than the partner. Of course, cost escalation strategies can be very hurtful when they are being enacted, so we are not recommending that people use this strategy. It would be useful for researchers to determine the nonverbal behaviors that people use when employing cost escalation, as well as the associations that these behaviors have with emotional outcomes.

In addition to using indirect strategies such as avoidance, withdrawal of social support, and cost escalation to end their relationships, people also use direct strategies that are either negative or positive in tone. On the negative side, researchers have found that individuals may end their relationships by engaging in aggressive, accusatory communication, through which partners blame one another for relationship problems and decide that the best or only alternative is to breakup (Cody, 1982). Couples engaging in this type of blaming strategy are likely to use many of the same nonverbal behaviors associated with competing or avoiding conflict styles, such as overt hostility, contempt, defensiveness, or violence. On the other hand, some couples end their relationships using positive, supportive communication, which has sometimes been referred to as positive tone or integrative strategy (Baxter, 1984; Cody, 1982; Metts, 1997; Perras & Lustig, 1982). Couples who use this strategy employ problem-solving techniques to try and reach an equitable agreement, particularly when there are issues revolving around children and finances. Nonverbal behaviors associated with problem solving and integrative communication, such as extended talk time, more eye contact, and smoother turn switching may help couples negotiate the breakup more effectively. Positive tone strategies also involve being emotionally supportive of one another. Partners may make remarks such as "I'm sorry we can't work this out, but I'm glad for the time we spent together," or "You are a really special person and I know you will take good

care of the children.” Nonverbal expressions of interpersonal warmth and positive affect, such as smiling and warm vocal tones, may enhance the effectiveness of such remarks.

## SUMMARY

Interpersonal conflict occurs when two interdependent people express disagreement regarding incompatible goals. Conflict can have positive or negative effects on a relationship, depending on how people communicate. In general, collaborating and compromising strategies are perceived as effective and appropriate during conflict interaction. These cooperative strategies are associated with nonverbal behaviors such as direct body orientation, vocal animation, kinesic involvement, eye contact, and extended talk time. Competing and avoiding strategies are uncooperative. As such, they tend to be perceived as less competent ways of handling conflict within relationships. Competing tactics are often accompanied by loud vocal tone, indirect body orientation, and kinesic animation, whereas avoiding tactics are often accompanied by decreased gaze, indirect body orientation, silence, and adaptors. Finally, the accommodating strategy is perceived as effective when the person who gives in is less invested in the outcome than the partner. Otherwise, this strategy tends to be perceived as incompetent. The accommodating strategy appears to be accompanied by nonverbal cues reflecting warmth, relaxation, and passivity. Researchers have also identified specific nonverbal behaviors that fall under eight themes: (1) overt hostility and aggression, (2) physical violence, (3) contempt, (4) defensiveness, (5) withdrawal or lack of involvement, (6) problem solving, (7) warmth, and (8) hurt.

Happy couples display different communication patterns than distressed couples during conflict interaction. Gottman's research has shown that couples are more likely to divorce if they engage in a sequence of conflict behaviors that moves from criticism to contempt to defensiveness, and then finally, to stonewalling. Furthermore, Gottman's work suggests that happy couples tend to engage in five positive expressions for every negative expression, whereas distressed couples tend to engage in a 0.8 to 1 ratio of positive to negative expressions. During both conflict and everyday interaction, happy couples also show more positive affect and less negative affect than distressed couples. In addition, distressed couples are more likely to decode neutral messages negatively, which can launch spirals of destructive communication. Distressed and violent couples may also have trouble presenting rational arguments and engaging in effective problem-solving behaviors during conflict. This social skill deficit leads some individuals to resort to aggressive or violent communication. Finally, although the de-

mand-withdrawal sequence is a fairly common pattern across all couple types, distressed and violent couples engage in this sequence more often and for longer periods of time than do happy couples.

Compared to the literature on conflict, the literature on disengagement contains very few direct references to nonverbal communication. Nonetheless, research and theory on disengagement suggests that avoidant behaviors play a key role in many relational breakups. The type of conflict behaviors couples engage in may also be predictive of whether a couple moves from one disengagement phase to the next. Indirect disengagement strategies, such as avoidance, withdrawal of support, and cost escalation are likely to involve nonverbal cues such as reduced eye contact, nonimmediacy, and overt hostility. The positive or negative tone of direct disengagement strategies may also be partially determined by nonverbal cues reflecting hostile versus affectionate emotion. Far more work is needed to discover how nonverbal cues function as couples move toward relational breakup.

## Afterthoughts

*David watches Tina's frame get smaller and smaller as she walks away. For a moment he is tempted to run after her. He has strong feelings for Tina and he certainly doesn't want to spend the day alone, but pride—and fear of making another scene—stop him from going after her. He thinks about taking the mule ride down the Canyon alone, but somehow it just doesn't seem right to go without Tina. Instead he walks around the area taking in the sights and thinking about what he should do next. About an hour later he returns to their room. Tina, who is curled up on the bed reading a book, doesn't seem to notice him enter the room. "Hi," David says tentatively. "Hi," Tina answers in a tight, flat voice. Her eyes don't move from the book. David stifles a sigh and says, "Do you want to talk?" Tina puts a marker in her book, sits up, looks directly at David, and replies "It depends on what you have to say."*

Of course, as this book has demonstrated, it might also depend on what David does. Will Tina and David be able to manage this issue effectively and continue building a strong relationship? Or will this episode mark the beginning of an unstoppable decline in their relations with each other? The nonverbal and verbal messages they exchange in the next few moments could be critical in determining the answer to these questions. We will leave the ending of this scene to the reader's imagination. Instead, we focus here on the practical implications of the research findings for couples such as Tina and David. Based on the nonverbal literature, what types of knowledge and skills would have been particularly helpful for Tina and David as they navigated—and perhaps continue to navigate—the ups and downs of their relationship? Just as importantly, we identify new areas of nonverbal research



that could provide information germane to relationship functioning. Thus, in this final chapter we examine each of the content areas reviewed in this book by noting practical implications and directions for future research. Our review of practical implications is not meant to be exhaustive. Rather, we wish to note some of the findings that we deem particularly significant within relational contexts.

## IMPLICATIONS FOR EACH CONTENT AREA

### Attraction

Perhaps the most evident function of interpersonal attraction is that it initiates relational interaction. That is, without attraction to draw people together, many personal relationships would simply never happen. Beyond that, though, attraction is accompanied by some powerful effects, one of which is to make the object of attraction appear ideal in every way. The halo effect is pervasive; when people are considered attractive, they are also judged by others to be moral, intelligent, compassionate, and humorous. Indeed, they can appear in possession of nearly every desirable social, psychological, and intellectual quality merely because of their level of attractiveness; this can have the effect, in newly forming relationships, of causing the partners to “view each other through rose-colored glasses,” mentally accentuating every positive trait and ignoring or downplaying faults of any kind. This form of perceptual distortion is adaptive, in one sense, because it allows (or even encourages) people to form significant pair bonds that might otherwise be mitigated by critical analyses of their partners’ shortcomings. Indeed, when Tina and David first met, their attraction for each other led them to focus their attention on the many positive qualities they each had. Tina was drawn to David’s laid-back style and she was impressed by his commitment to his family. Likewise, David was turned on by Tina’s confidence and her obvious intelligence. Of course, Tina and David did possess these qualities. Their attraction to each other didn’t “invent” them, but it caused David and Tina to focus attention on those aspects of each other that were important to them as they developed their relationship.

Clearly, it can be adaptive for partners in a newly forming relationship to focus on each other’s positive qualities; otherwise, they may never get past each other’s shortcomings enough to form a pair bond in the first place. Herein lies the potential problem of attraction, however: it leads partners in a newly forming relationship to ignore or downplay each other’s faults. Indeed, the experience of being attracted to, and falling in love with, someone else can be so overwhelming that it blinds one to what may be very signifi-

cant red flags in the potential relationship. Although he was drawn to her confidence, might David's attraction to Tina have kept him from noticing her tendency to be jealous or suspicious? Is it possible for people to be, in a sense, blinded by love?

We are certainly not suggesting that Tina and David, or any particular pair, would necessarily have failed to pair bond had they been better appraised of each other's shortcomings in the beginning. All relational partners have faults; obviously, relational development proceeds, aided, no doubt, by the perceptual distortion of attraction. The lesson here, however, is that interpersonal attraction is a powerful force that necessarily raises the likelihood of relational partners disregarding what may indeed be consequential shortcomings or relational red flags that, in the long run, should impede relational development. Not every potential relationship is a good one, from either a social or an evolutionary perspective; the danger is that the force of attraction can be so strong as to draw people together who shouldn't be.

## Affection

The need for love and affection is pervasive. Humans don't just need to be loved; they need to be shown they are loved. Those who don't receive as much affection as they need suffer the consequences of reduced self-esteem, increased susceptibility to stress and depression, lower happiness, and compromised endocrine and immune system functioning (for review, see Floyd, in press). Despite its importance for individual well-being and for the formation and maintenance of personal relationships, however, the communication of affection can be fraught with risk. Particularly at the start of a new relationship, two of the most potent risks of conveying affection are (1) that the expression will be unreciprocated; and (2) that the implications of the expression will threaten the receiver's negative face needs.

For example, both Tina and David wanted to convey their feelings of love and affection for each other early in their relationship. David's concern, however, was that Tina didn't feel the same level of affection for him as he felt for her; thus, he worried that she wouldn't reciprocate his expression. As Floyd (in press) pointed out, the failure to reciprocate an expression of affection can be devastating for the sender, conveying, as it does, a lack of love, appreciation, and care. As such, the lack of reciprocity threatens the positive face needs of the sender (see Erbert & Floyd, 2004). This threat is made even more salient by the strong, culturally engrained expectation that positive acts must be reciprocated in kind, an expectation Gouldner (1960) referred to as the *moral norm of reciprocity*. Had David expressed his love for Tina and had she failed to reciprocate, David's implicit understanding of the reciprocity of positive behaviors would have served to add insult

to the injury; Tina's implicit message would have been that she did not love him. Given the gravity of these potential outcomes, it was little wonder that David worried about whether Tina would have reciprocated a gesture of affection.

Simultaneously, Tina worried that conveying her feelings for David would scare him off. As Erbert and Floyd (2004) noted, this is a type of negative face threat; even if he shared Tina's feelings, David might have felt overwhelmed by their potential implications. In particular, he may have worried about Tina's expectations for the trajectory of their relationship: Does she want to be an exclusive couple now? Does she expect us to move in together? What do these feelings of love mean for me and for our relationship?

Like nonreciprocity, this is also a tangible risk of expressing affection, because even if relational partners share the same feelings for each other, that does not necessarily mean they agree on the implications those feelings carry about the nature or status of the relationship. One partner may believe that acknowledging mutual love is an end unto itself; another may see it as the initiation of a series of relationally defining actions, such as becoming exclusive, getting engaged, or moving in together. In such a situation, one partner may feel that the other's expectations are restricting his or her own freedom and autonomy (e.g., "if she loves me, that means she wants to move in together and I'm not ready for that"). Given this potential, it is easy to see why Tina was concerned that her expression of affection might scare David. In fact, if it had, then David's fear might actually have caused him to withdraw, mitigating the very relationship Tina was hoping to advance by her expression.

Of course, despite its risks, the communication of affection is cherished in many personal relationships, be they romantic, platonic, or familial. Once Tina and David overcame their fears and conveyed their love to each other, they were at once relieved and filled with excitement about the potential for their relationship. Indeed, the sharing of affectionate feelings consistently shows strong associations with the stability and satisfaction of a wide range of personal relationships, whereas the curtailing of affectionate behavior is often characteristic of relational decline (Floyd, in press). Affection, and the behaviors through which it is conveyed, is thus a strong dual-edged sword that is able, paradoxically, both to initiate and sustain relationships and also to prevent them from forming in the first place.

## Emotion

An unemotional relationship would be boring and stagnant. Indeed, the term *e-motion* itself suggests activity. During the beginning stage of relationships, partners are often polite and friendly as they try to make positive impressions on one another. However, as the relationship develops, partners

usually feel freer to show negative emotion to one another (Guerrero & Andersen, 2001). Thus, couples should not be surprised when negative emotions begin to surface more frequently once a *honeymoon stage* is over. On the contrary, couples should see the loosening of rules of social politeness as a sign that the relationship has reached a more open and mature stage of development. The key is that positive emotion is still expressed more often than negative emotion overall—both in everyday interaction and during conflict episodes (Kelly, Fincham, & Beach, 2003).

Displaying affectionate emotions, such as joy, love, and interpersonal warmth, can help couples maintain satisfying relationships. Positive affect can be expressed in a variety of ways, ranging from subtle cues such as head tilts, communicating on the same physical plane, using warm vocal tones, and being patient, to more direct cues such as using affectionate touch, giving gifts, or having sex. People express positive affect in different ways. For example, Marston and Hecht's program of research (as summarized in chap. 5, this volume) demonstrates that some individuals communicate their love more nonverbally than verbally. Individuals may also be predisposed to express love using either dramatic or subtle behaviors. It is critical, therefore, for partners to realize that they may not express positive emotions in the same manner as one another. Recognizing when a partner's nonverbal cues reflect positive affect, even when those cues are different than one's own way of expressing emotion, aids in maintaining happy relationships.

Although relational partners should express more positive than negative emotions to one another, there are times when negative emotion needs to be expressed. Research has shown that partners who express hostile emotions, such as anger, jealousy, or contempt, in an aggressive manner tend to report low levels of relational satisfaction. Of course, some level of aggression or negativity is likely expected when one is experiencing these emotions. For instance, David would probably have been surprised if he had returned to find Tina smiling with delight to see him. Thus, couples should not be afraid to show negative emotion; indeed, expressing negativity helps partners understand one another's feelings and take problems seriously. However, expressing hostile emotion is likely to be unproductive if it creates negative cycles and prevents partners from talking about the issue at hand. Expressing emotions such as anger and jealousy in a direct but nonthreatening manner appears to be most effective. For instance, researchers have uncovered assertive modes of anger expression, such as keeping one's voice calm while voicing complaints, that are related to both communication competence and relational satisfaction. Similarly, refraining from showing hostile contempt or anger in response to a partner's expression is helpful, as would be the case if Tina refrained from rolling her eyes when David told her that Ann was no longer an important part of his life.

In addition to benefiting from being able to encode emotions appropriately and effectively, relational partners who are good decoders of emotional expressions have an advantage. Indeed, studies have shown that decoding accuracy is a better predictor of relational satisfaction than encoding ability (e.g., Gottman & Porterfield, 1981). Not only do satisfied couples tend to encode positive emotion accurately, they also tend to attribute positive affect to relationship causes when appropriate (Koerner & Fitzpatrick, 2002). Partners in dissatisfying relationships, on the other hand, are more likely to perceive and reciprocate negative emotion, even when the emotion being expressed is actually positive or neutral (e.g., Noller, 1980, 1992). Indeed, Gaelick et al. (1985) demonstrated that regardless of satisfaction level, couples tended to miss cues related to positive affect and instead to focus more on behaviors reflecting negativity. The ability to break away from this pattern—and decode positive affect as well or better than negative affect—appears to be an important communication skill.

Together, the research summarized above points to the following principles regarding the nonverbal expression of emotion in close (and particularly romantic) relationships. First, couples should expect that negative emotion will be communicated more often once a relationship is out of the honeymoon phase. Second, expressions of positive affect help maintain relationships. Third, it is important to recognize and decode a partner's positive affect cues, even if they are different than one's own expressions of positive affect. Fourth, negative emotions should be expressed directly but not aggressively to maximize satisfaction within a communication episode and a relationship. Fifth, individuals who do not overestimate the degree to which their partners are expressing negative affect are more likely to engage in productive and satisfying communication.

These principles also suggest directions for new research. For example, although research has demonstrated that experiencing and communicating positive affect is associated with relational satisfaction, scholars have not yet uncovered specific types of nonverbal expressions that are used to maintain relationships. Adding nonverbal cues, such as specific types of touch, facial expressions (e.g., smile), or artifactual communication (e.g., making a room cozy), to typologies of relational maintenance would provide a more complete picture of the communication people use to keep their relationships stable and satisfying. Indeed, researchers have included behavior related to positivity, romance, and affection in their relational maintenance typologies (e.g., Dindia, 2003; Stafford & Canary, 1991), although nonverbal messages are rarely mentioned specifically. Similarly, more research could be conducted to determine which specific expressions of hostile emotion are most destructive within relationships. Gottman's (1994) research, for instance, has shown that facial and vocal expressions of contempt often set off a chain of destructive communication during conflict

episodes. The relative importance of other nonverbal cues related to hostile emotions, such as giving the evil eye, slamming doors, gritting teeth, clenching fist, or withdrawing affection have yet to be studied in such detail. Likewise, scholars have yet to discover whether behaviors such as giving gifts, enhancing appearance, or being especially nice and affectionate are effective in halting cycles of negative expressivity.

### **Power and Dominance**

As chapter 6 illustrated, power and dominance are key defining features of relationships. People have power when they have the ability and potential to influence their partners. People can express or gain power through the use of interpersonal dominance, which might include behaviors such as looking at the partner when speaking, standing over the partner, or controlling the conversational floor. Overall, research suggests that couples in relationships characterized by equal (or nearly equal) power are happier than couples in relationships characterized by one partner being dominant and the other being submissive. Achieving a healthy balance of power, however, can sometimes be difficult.

One strategy for building a balanced relationship is for partners to communicate messages of equality, trust, and receptivity to one another (Burgoon & Hale, 1984, 1987). To do so, couples may display postural mirroring, communicate on the same physical plane, or exhibit cues related to liking and cooperation, such as head nods, vocal warmth, and smiling. Another strategy is to use dominant behaviors that reflect social skill rather than aggression. For instance, when trying to influence one's partner, using nonverbal cues related to pleasantness and expressiveness is likely to be perceived as more appropriate and satisfying than using behaviors related to aggressiveness. Similarly, showing poise (in the form of relaxation and confidence) and panache are ways of communicating dominance without resorting to aggression. On the other side of the coin, partners should avoid using intimidating behaviors such as threatening stares, rolling eyes, yelling, administering the silent treatment, and, especially violence.

Research suggests that individuals who are less socially skilled may resort to intimidation and threat because they cannot gain power any other way. Thus, developing training programs that teach couples how to engage in persuasive dialogue using competent nonverbal and verbal communication may be critical in alleviating the tendency for unskilled individuals to resort to aggressive means of control and influence. Such programs could be based on the following three principles, derived from the literature summarized above: (1) relational partners who display messages of equality, trust, and receptivity tend to be more satisfied; (2) partners who have the ability to communicate dominance through socially skilled behavior (influ-

ence, poise/self-assurance, appropriate levels of conversational control, and panache or dynamism) are better able to achieve a satisfying balance of power than are those who resort to aggression; and (3) behaviors related to intimidation, threat, and violence are inappropriate and likely to lead to temporary submission rather than enduring social influence.

Aside from these general principles, there has been surprisingly little research on specific nonverbal correlates of power and dominance within the context of close relationships, especially compared to the literature on power within organizational contexts. Thus, basic descriptive research needs to be conducted to investigate the following issues: (a) if and how principles derived from the organizational literature (i.e., space and privacy, centrality, elevation, and interactional control) generalize to close relationships; (b) how nonverbal behaviors such as gaze, touch, vocal and kinesic expressiveness, close distancing, and physical appearance affect compliance-gaining outcomes within close relationships; (c) how much partners can exercise conversational control (through the use of increased talk time, interruptions, and so forth) without being perceived as insensitive or overly dominant; (d) which forms of socially skilled dominance behavior (e.g., poise or panache?) are most effective and satisfying when used by relational partners; and (e) which specific types of intimidating or violent behaviors lead to the largest power differentials and the lowest levels of relational satisfaction.

Theoretical issues related to sex differences and relative power are also in need of further investigation. At this point, the jury is still out on the extent to which sex differences in nonverbal communication are related to power. Henley's (1977, 1995) subordination hypothesis suggests that men and women display different patterns of nonverbal communication because men have more social power. Specifically, Henley has argued that men display dominant behaviors such as talking loud, interrupting others, and initiating touch more than women, whereas women use submissive behaviors such as smiling and letting people move in closer to them more often than men. In addition, Henley and her colleagues have contended that women are more accurate and sensitive decoders because having less social power necessitates developing skills related to listening and affiliation (e.g., Henley & Kramarae, 1991). However, the research reviewed in chapter 6 demonstrates that sex differences in dominant behaviors such as interruptions are inconsistent. Moreover, behaviors such as smiling may be used to influence or submit to others. In response to these inconsistencies and complexities, scholars have tried to untangle the relationships between sex (men vs. women), power, and behavior. For instance, Sagrestano and her colleagues have demonstrated that social role is a better predictor of power and influence strategies than is sex (e.g., Sagrestano, Heavey, & Christensen, 1998). Thus, in a given situation, if a wife is in a more powerful



position than her husband, she will be more likely to show dominance. Woods (1988), however, found that men talked and interrupted more regardless of whether they were in a high or low power position, and Hall and Friedman (1999) provided evidence showing that sex differences in nonverbal behavior among coworkers actually became stronger when the influence of status was controlled. These seemingly contradictory results suggest the need to search for factors that may moderate or mediate the relationships among sex, power, and nonverbal behavior.

As Sagrestano's work suggests, the concept of relative power may help explain cases where women display more power than men. Relative power is also a key concept in Dunbar's (2003, 2004) dyadic power theory, which was developed to explain how individuals' perceptions of themselves as more, less, or equally powerful (when compared to their partner) affects their use of dominant communication. Some research has shown that people with more relative power use more dominant behavior (e.g., Kollock, Blumstein, & Schwartz, 1985). Other research has demonstrated that individuals who have high and low levels of relative power use different strategies, with the more powerful partner likely to use direct strategies such as coercion and bargaining and the less powerful partner likely to use indirect strategies such as ingratiation or manipulation (Falbo & Peplau, 1980; Howard, Blumstein, & Schwartz, 1986). Dunbar and Burgoon (2005) hypothesized a curvilinear association between relative power and dominant communication, such that individuals in power-balanced relationships would display more dominance than those who were either low or high in relative power. They reasoned that individuals low in relative power would be hesitant to assert themselves; individuals high in relative power would not need to communicate much to influence their partners; and those in power-balanced relationships would be most likely to engage in communication to try to persuade one another. Dunbar and Burgoon found mixed support for their prediction. Consistent with their hypothesis, people with high relative power were the most facially pleasant and relaxed, and were rated by their partners as using low levels of dominant behavior. Inconsistent with their hypothesis, however, people with low relative power used the most interruptions and illustrator gestures, presumably as a way to try and gain power.

The mix of findings found by scholars studying the effect of relative power on dominant communication provides an impetus for future research, especially since the concept of relative power gets at the heart of relationship dynamics. We suspect that relative power is a fluid concept in many relationships, with each partner having more power at various times based on topic and context. The overall pattern of power, as well as differences based on context, probably need to be accounted for when predicting patterns of dominant communication. In addition, it would be interesting to examine whether behaviors exhibited by partners low in relative



power reflect less social skill than the behaviors used by partners high in relative power. The causal nature of the behavior–power relationship is also uncertain. People may become powerful because they are skilled at using appropriate and effective types of dominant behavior, or people may be more relaxed and have less need to resort to intimidation when they perceive themselves to be higher in relative power. These potential causal relationships, as well as the specific associations between relative power and nonverbal communication, offer fruitful avenues for future research.

## Deception

Once formed, personal relationships rely, at least implicitly, on mutual honesty. Deception is treated almost invariably as a violation or betrayal of relational expectations, and although not all discovered deceptions precipitate relational termination, those of sufficient gravity (e.g., the discovery of sexual infidelity) certainly can. Indeed, even suspicion—which is aroused by the mere potential that one has been deceived—can be relationally distressing, as it was for Tina when she suspected that David wanted to vacation at the Grand Canyon because he knew Ann would be there.

If the large body of research on deceptive communication warrants any conclusion, however, it is that most people fare poorly at detecting it. As we pointed out in chapter 7, there are actually two ways to be wrong when attempting to detect deception. First, one can mistake a lie for the truth; and second, one can mistake the truth for a lie. It is the former instance that often comes to mind when people think about their detection ability. Particularly in personal relationships, people want badly to trust each other and to believe that their partners would never lie to them. Since being lied to is so emotionally and psychologically distressing, this desire manifests itself in a truth bias that leads relational partners to believe each other unless there is a compelling reason not to.

Also at issue is the potential to mistake truthful statements for lies. This possibility is enhanced by the confluence of three related effects. First, people often rely on a fairly predictable list of specific nonverbal behaviors to indicate the veracity of what others tell them. Second, many of these behaviors are highly unreliable as cues to deception. Third, people thus fail to pay attention to other nonverbal behaviors that do covary reliably with deception. Illustrative of these effects is the reliance often placed on eye contact as an indicator of deception. If David looked uncomfortable when explaining to Tina that he didn't know Ann would be at the Canyon, Tina might have responded by saying something like "Look me in the eyes and tell me that." Such a move would imply that she trusts David's eye contact to be an indicator of his truthfulness on the matter. Or, more specifically, she would infer from his lack of eye contact that he was being deceptive. As

we addressed in chapter 7, however, such an approach would most likely fail, both because eye contact is a much poorer deception cue than Tina would believe it to be, and also because her focus on David's eye contact would prevent her from surveiling other, more reliable cues.

A shortcoming to much of the research on deceptive communication is that it has not taken adequate account of the interactive nature of deceptive acts. As Buller and Burgoon (1996) have argued, deception is a communicative act that is influenced by the behaviors of both the sender and the receiver. Senders, of course, participate in the process by making the decision to lie, by crafting the deceptive message, and by conveying it in such a manner as to enhance its believability. However, as Buller and Burgoon note, this is not a passive exchange; receivers also participate in the creation of deception. They judge the veracity of the message and attend to the nonverbal behaviors of the sender. If they experience suspicion, they must choose whether, and how, to convey that to the sender. Communicatively skilled senders can then sense receivers' suspicion and adapt their own performance, so as to appear more credible.

Conceived of in this way, deception becomes a truly interactive event—but very little research has capitalized on this observation. The typical experimental paradigm in deception research has been to ask receivers to judge the veracity of messages delivered to them in a monologic fashion, in a context in which they are afforded no opportunity to affect the sender or the message. Buller and Burgoon's research has moved beyond this type of passive situation by placing participants in dialogic interactions and by manipulating and measuring the behaviors of receivers as well as senders. Although this move represents a genuine advance in the operationism of relational deception, the conversations elicited in such studies are still far from being truly interactive. In the service of experimental control, the conversational participants are typically still restricted in terms of how long they can talk, what they can talk about, what forms of deception are introduced into the conversation (and at what point they are introduced), how far apart the participants are sitting from each other, and a host of other things that are characteristic of natural relational interaction. We certainly do not discount the importance of experimental control nor the advances in understanding about deception that this research paradigm has afforded. Rather, we point out that deception research has much new methodological ground to cover before our understanding of its interactive nature will become complete.

### **Conflict and De-escalation**

Conflict is an inevitable part of most, if not all, close relationships. In some cases, conflict is healthy, leading to understanding, change, and relational growth. In other cases, conflict is destructive, leading to hurt feelings, fur-

ther misunderstanding, and relational stagnation or decline. The communication pattern that characterizes conflict is instrumental in determining whether or not a relationship, as well the conflict itself, is healthy or destructive. Thus far, research suggests that nonverbal behaviors related to problem solving, interpersonal warmth, and cooperative strategies (i.e., collaboration and compromise) are associated with competence and relational satisfaction. On the other hand, nonverbal behaviors related to overt hostility, violence, contempt, defensiveness, withdrawal, and hurt tend to accompany uncooperative strategies (such as competing and avoiding), and to associate with less competence and satisfaction. The underlying message seems clear—engaging in cooperative behavior during conflict interaction is beneficial in relationships. Putting this principle into practice, however, can be difficult because high levels of arousal, emotional flooding, and the innate tendency to reciprocate negativity all pull people toward less constructive modes of communication during conflict interaction.

Several specific nonverbal behaviors have been identified as part of an overall strategy of cooperation. Newton and Burgoon (1990a) found that people using verbal statements related to describing and explaining conflict issues tended to display postural relaxation, speak in a softer, deeper, and slower voice, and use more self-adaptors. Sillars, Coletti, Parry, and Rogers (1982) showed that individuals using an integrating conflict style tended to talk more (in general as well as during single speaking turns), look away less, and speak slower. Feeney, Noller, Sheehan, and Peterson (1999) suggested that increased gaze, vocal and kinesic expressiveness, and affirming head nods also characterize a cooperative conflict style. Clearly, couples would be well served by using these forms of nonverbal communication during conflict situations. Such behaviors let a partner know that one is listening and thinking through the issues. Couples should also use nonverbal behaviors related to warmth and affiliation (e.g., smiling, vocal pleasantness) during conflict situations to convey openness and prevent negativity from entering or escalating during conflict episodes.

A number of nonverbal behaviors are related to competitive or hostile conflict strategies. Newton and Burgoon (1990a) showed that individuals who made accusatory and invalidating statements during disagreements also tended to speak in loud, sharp, high-pitched and fast voices, shake their heads, and use animated gestures. In addition to these behaviors, overt hostility can be communicated through physical attacks such as clenching one's fist or throwing things, and displays of nonverbal disapproval such as slamming doors or rolling one's eyes (Shaver, Schwartz, Kirson, & O'Connor, 1987), as well as physical violence toward the partner, such as pushing, shoving, or slapping someone (Marshall, 1994). Gottman's (1994) research has identified contempt as a particularly critical form of expression within conflict interaction. Contempt, which involves showing dis-

dain and superiority, is often communicated nonverbally through behaviors such as sarcasm, looking away or down at the partner, or appearing angry and shocked. Gottman's work demonstrates that contemptuous expressions can trigger a chain of negativity, with contempt leading to defensive reactions and stonewalling. Similarly, nonverbal behaviors reflecting hostility are often reciprocated, leading to negative cycles of behavior that are difficult to break away from in the heat of an argument. Thus, relational partners who avoid using nonverbal hostility are more likely to stay focused and manage conflict issues appropriately and effectively.

Avoidance or withdrawal is another roadblock in the path toward constructive conflict management. Researchers have uncovered several nonverbal behaviors related to avoidance or withdrawal, including an increased use of adaptors (Sillars et al., 1982), less gaze, fewer open gestures, more head down positions, and more head turns (Feeney et al., 1999). Gottman (1994) identified a specific form of avoidance—stonewalling—which signals that relationships are in serious danger of de-escalating and eventually ending. Stonewalling occurs when partners stop listening to one another and withdraw from the interaction—either psychologically or physically. Defensiveness, which also signals a lack of openness, is often a prelude to stonewalling that occurs in response to contemptuous or hostile expressions (Gottman, 1994). Defensiveness is communicated through nonverbal behaviors such as a closed body position, increasing interpersonal distance, whining, and looking away. In many ways, such behaviors are the opposite of those correlated with cooperative conflict strategies.

An obvious recommendation for couples is to use cooperative nonverbal behaviors while refraining from hostility and withdrawal. However, withdrawal behavior may be effective under particular circumstances, such as when partners are emotionally flooded or when an issue has been discussed repeatedly without success. In such cases, postponing or avoiding discussion could be beneficial. However, if avoidance becomes a consistent pattern within a relationship, issues will remain unmanaged and partners will likely become dissatisfied. It is also important to refrain from showing nonverbal hostility or avoidance so that negative cycles of behavior are less likely to emerge. As the research summarized in chapter 8 shows, hostility tends to beget more hostility or to lead to withdrawal—two patterns of communication that are associated with relational dissatisfaction.

More research is needed to flesh out the specific nonverbal expressions that are most likely to lead to such negative cycles. Gottman's (1994) seminal work on conflict has identified contempt and defensiveness as two specific types of communication that are particularly detrimental to relationship functioning. Within these two broad categories, there may be specific behaviors (e.g., rolling eyes, head tosses, standing to look down at someone) that are especially powerful predictors of negative reactions. Newton

and Burgoon's (1990a, 1990b) work has taken an important first step in uncovering connections between verbal strategies and nonverbal behaviors during couple disagreements. Additional research would help scholars develop more comprehensive profiles of how frequently various nonverbal behaviors are used during conflict interaction, as well as how nonverbal and verbal communication work together to affect outcomes such as relational satisfaction and perceived competence.

At this point, scholars have considerable knowledge about the general patterns of nonverbal communication that characterize conflict within close relationships and distinguish happy couples from distressed couples. Gottman's (1994) research also delineates how dysfunctional conflict interaction can lead to relationship termination. Less, however, is known about the role that nonverbal communication plays during the process of relational de-escalation. Research suggests that patterns of withdrawal may intensify as couples move toward breakup. Couples may also go through periods of increased hostility as they disengage from one another. So far, though, scholars do not know which specific nonverbal behaviors people use during this process. Similarly, scholars have uncovered a host of primarily verbal strategies that people use to initiate relational breakup. Learning how the nonverbal behaviors accompanying these strategies soften or harden the message that one wants to break up is an important practical question for researchers to address in the future.

## CONCLUSION

Relationships, as well as the interactions that comprise them, are complex yet simple. The complexity stems from the myriad of cognitions, emotions, and behaviors that interact within individuals and between dyadic partners to create unique relationships. Yet at another level relationships are simple—they fulfill fundamental human needs associated with bonding and belonging. Nonverbal communication is an important element in developing and sustaining relationships that meet these needs. As the content of this book has shown, nonverbal cues play a critical role in processes related to attraction, emotional experience and expression, affection, power and dominance, deception, and conflict—all of which characterize people's closest relationships. Nonverbal communication is also rooted in both biology and social learning, as well as the interaction between these two forces. As researchers continue to make new discoveries about how nonverbal communication functions in relationships, we are hopeful that couples such as Tina and David will be able to utilize scholarly knowledge to improve their relationships as well as their lives.

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# Author Index

## A

Abbey, A., 113  
Abbott, M., 25  
Adams, G. R., 61, 152  
Adelman, P. K., 61  
Afifi, W. A., 89, 90  
Aguinis, H., 135, 136  
Aida, Y., 139, 149, 160  
Alberts, J. K., 24, 41, 43, 46, 205  
Alexander, R. D., 22  
Allen, C. M. B., 113  
Allspach, L. E., 49  
Alpert, M., 178  
Altman, I., 142  
Alton, A. O., 182  
American Academy of Pediatrics, 29  
Amidon, M. D., 195  
Amish, P. L., 122  
Andersen, J. F., 150  
Andersen, P. A., 4, 6, 7, 8, 10, 11, 14, 21, 26,  
42, 43, 46, 75, 102, 108, 109, 110, 111,  
113, 114, 115, 116, 117, 118, 121, 122,  
124, 125, 140, 142, 149, 156, 211, 212,  
213, 229  
Andreassi, J. L., 3, 168, 176  
Angleitner, A., 25  
Apatow, K., 72  
Apple, W., 157

Archer, J., 26  
Argyle, M., 200  
Arias, I., 123  
Armijo-Prewitt, T., 64  
Asherian, A., 25  
Ashmore, R. D., 59, 60  
Ashwell, M., 66  
Asthana, S., 25, 67  
Aune, K. S., 130, 131  
Aune, R. K., 76, 77, 130, 131, 152, 158, 170,  
180, 183, 192  
Avis, W. E., 67

## B

Baander-van Halewijn, E. A., 67  
Babcock, J. C., 138  
Bacue, A. E., 122, 125, 126, 134, 145, 154  
Bachman, G. F., 214  
Badzinski, D. M., 134  
Baesler, E. J., 35, 39, 89  
Bahr, S. J., 133, 137, 138  
Bailey, J. M., 25  
Bandura, A., 27, 28, 29, 30  
Barbato, C. A., 100  
Barbee, A. P., 63, 69, 70, 71, 72, 74  
Barber, N., 67, 69  
Barbieri, R. L., 67

- Barland, G. H., 169  
 Barlow, D. H., 207  
 Bar-On, R., 122  
 Baron, R. A., 77  
 Barten, H., 59  
 Bassili, J. N., 59  
 Bauchner, J. E., 177, 185  
 Bauer, G. B., 207  
 Bavelas, J. B., 9, 165, 201  
 Baxter, L. A., 123, 155, 219, 221, 222  
 Baxter, R. R., 65  
 Bazzini, D. G., 59  
 Beach, S. R. H., 123, 124, 125, 215, 229  
 Beatty, J., 176  
 Behnke, R., 178  
 Bell, R. A., 95, 104  
 Bellis, M. A., 65  
 Belske, A. L., 24  
 Bem, S. L., 97  
 Ben-Shakar, G., 168, 169  
 Berger, C. R., 36, 134  
 Berry, D. S., 72  
 Berman, P. W., 102  
 Bernstein, I. H., 70  
 Berntson, G. G., 169  
 Berscheid, E., 58, 61, 107, 108, 111  
 Bettens, F., 76  
 Biaggio, A., 25  
 Biddle, J. E., 58  
 Billings, A., 217  
 Birchler, G. R., 123  
 Birdwhistell, R. L., 2  
 Birk, T., 152, 156, 212  
 Bisanz, G. L., 151  
 Bishop, S. E., 195  
 Bisonette, V., 59  
 Bjork, R. A., 165  
 Björntorp, P., 67  
 Black, A., 165  
 Blake, R. R., 202, 203, 204, 205  
 Blank, A. L., 186  
 Blaschovich, J., 109  
 Blumstein, P., 138, 144, 148, 160, 233  
 Boburka, R., 122  
 Boca, S., 114  
 Bodenhausen, G. V., 123, 126, 127, 217, 230  
 Bodhorn, D. J., 181  
 Bombar, M. L., 96, 97, 103, 104  
 Bond, C. R., 184, 191  
 Bonnell, D., 268  
 Bonoma, T. V., 202  
 Booth-Butterfield, M., 85, 129  
 Borenstein, J. K., 207  
 Boster, F., 134  
 Bouchard, C., 66  
 Bourhis, R. Y., 49  
 Boutillier, R. G., 144, 153  
 Bower, J. W., 130  
 Bowman, L. L., 140, 142  
 Boysen, S. T., 169  
 Braaten, D., 116, 207  
 Bradac, J. J., 46, 49  
 Bradbury, T. N., 123  
 Bradshaw, D. H., 176  
 Braiker, H. B., 199  
 Brandt, D. R., 144, 184, 185, 186  
 Bridgestock, R., 70  
 Briggs, L. E., 149  
 Briggs, S. R., 59  
 Brockway, B. F., 178  
 Broderick, J. E., 123  
 Brody, A. B., 29, 147  
 Brommel, B. J., 156, 199  
 Brown, S. C., 166  
 Brown, T. J., 59  
 Brownlow, S., 92  
 Bruce, V., 2  
 Bruneau, T. J., 158  
 Brunswik, E., 32  
 Bryniarski, K. A., 68  
 Buchanan, D. R., 101  
 Buck, R., 116, 126  
 Buerkel-Rothfuss, N. L., 95  
 Bull, R., 180  
 Buller, D. B., 3, 4, 5, 7, 8, 11, 23, 26, 33, 42, 46,  
     54, 87, 89, 91, 130, 131, 150, 151, 152,  
     153, 154, 155, 156, 157, 158, 163, 166,  
     169, 170, 172, 173, 174, 180, 182, 183,  
     184, 186, 187, 188, 190, 191, 192, 194,  
     195, 196, 235  
 Burggraf, C. S., 147  
 Burgoon, J. K., 2, 3, 4, 5, 7, 8, 10, 11, 14, 23,  
     26, 27, 31, 32, 33, 34, 35, 38, 39, 42, 46,  
     49, 51, 54, 85, 87, 88, 89, 90, 91, 108,  
     121, 122, 125, 126, 133, 134, 135, 136,  
     137, 138, 139, 140, 143, 144, 145, 146,  
     150, 151, 152, 153, 154, 155, 156, 157,  
     160, 163, 166, 169, 172, 173, 174, 180,  
     182, 183, 184, 185, 186, 187, 188, 189,  
     190, 191, 192, 194, 195, 196, 202, 203,  
     204, 210, 211, 212, 217, 231, 233, 235,  
     236, 238  
 Burks, N., 138, 157  
 Burleson, B. R., 126, 128, 129

Burman, B., 207, 208, 210, 221, 212, 213, 216, 217  
 Burt, D. M., 25, 70  
 Buss, D. M., 20, 24, 25, 62, 67, 111, 117, 134, 152, 158  
 Butler, D. L., 81  
 Byatt, G., 74  
 Byrne, C. A., 123

## C

Cacioppo, J. T., 127, 169  
 Cahn, D., 200  
 Calabrese, R. J., 37  
 Caldwell, M., 137  
 Calero, H. H., 3  
 Callan, V. J., 218  
 Camire, L., 25  
 Canary, D. J., 116, 123, 124, 128, 147, 198, 200, 201, 202, 203, 204, 205, 206, 211, 213, 230  
 Cappella, J. N., 39, 42, 91, 144, 145, 154  
 Cargile, A. C., 49  
 Carli, L. L., 145, 146  
 Carlsmith, J. M., 23, 157  
 Carlson, J. G., 121  
 Carlson, J. R., 194  
 Carnevale, P. J., 202, 203, 204, 205  
 Carpenter, B. N., 59  
 Carstensen, L. L., 215,  
 Carter, J. D., 126  
 Casey, R. J., 21, 70  
 Cash, T. F., 59, 61  
 Cate, R. M., 199, 208  
 Chandler, T. A., 157, 216  
 Chao, E. Y., 178  
 Chapman, C. R., 176  
 Cherulnik, P. D., 59  
 Cheshire, J., 49  
 Chevalier-Skolnikoff, S., 23  
 Chovil, N., 165  
 Christensen, A., 84, 148, 205, 218, 232  
 Christopher, F. S., 157, 159, 208, 216, 217  
 Chronis, H., 164, 165, 166  
 Chua, E., 6  
 Churchill, M., 91  
 Cissna, K. N., 213  
 Clark, D. D., 113  
 Clark, R. D., 24  
 Clifford, M., 58

Clore, G. L., 108  
 Cloven, D. H., 144, 204  
 Coats, E. J., 134, 137  
 Cochran, S. D., 149  
 Cody, M. J., 113, 169, 170, 173, 174, 178, 179, 180, 221, 222  
 Coffman, S., 108  
 Coker, D. A., 31, 39, 87, 150, 211, 212  
 Coker, R. A., 31, 39, 87  
 Cole, T. J., 66  
 Colella, M. J., 182  
 Coletti, S. F., 203, 211, 236, 237  
 Collett, P., 31  
 Comadena, M. E., 163, 169, 185  
 Comer, R., 65  
 Comstock, J., 183, 191, 192  
 Conaty, J. C., 144  
 Conger, J. C., 59  
 Conway, M., 108  
 Cordova, J. V., 217  
 Cotton, J., 58  
 Coupland, J., 49  
 Coupland, N., 49  
 Cox, G., 217  
 Coyne, J. C., 120  
 Crossman, S. M., 61  
 Crumley, L. P., 213  
 Cullberg, G., 67  
 Cummings, S. R., 68  
 Cunningham, M. R., 22, 63, 69, 70, 71, 72, 74  
 Cupach, W. R., 152, 158, 159, 199, 200, 201, 202, 204, 206, 209, 211  
 Curran, J. P., 59  
 Cutrow, R. J., 169

## D

Dainton, M., 123  
 Daly, J. A., 144  
 Daly, M., 22, 104  
 Darwin, C., 18, 19, 85  
 Davis, C., 168  
 Davis, F., 30  
 Davis, M., 180  
 Davis, T., 189, 190, 194  
 Dawson, R. S., 68  
 Dean, L. M., 101, 142  
 DeFrancisco, V. L., 125, 147  
 DeFrank, R. S., 163  
 DeHart, D. D., 72

Dehle, C., 200  
 Daie, N., 169  
 DeLosse, L. F., 175  
 Dennis, H. S., 170, 174  
 Denton, W. H., 126  
 DePaulo, B. M., 167, 170, 171, 172, 173, 176,  
 177, 180, 181, 182, 186, 187, 188, 189,  
 190, 193, 194  
 Deprés, J. P., 66  
 Derlega, V., 61  
 deTurck, M. A., 87, 89, 152, 157, 173, 179, 181,  
 186, 188  
 DeVito, J. A., 5  
 Dickson, S., 113  
 DiClemente, L., 75  
 Dillard, J. P., 22, 23, 91, 108, 110, 111  
 Dillman, L., 38, 39, 46, 49, 51, 184, 191, 192,  
 196  
 Dindia, K., 122, 123, 145, 147, 230  
 Dion, K. K., 58, 59, 60, 61  
 Dion, K. L., 60  
 Dipboye, R. L., 58  
 Dixon, A. K., 66  
 Dodds, R. A., 149  
 Dodge, K. A., 30  
 Dolin, D. J., 129  
 Donaldson, G. W., 176  
 Dovidio, J. F., 157  
 Draper, T. W., 89, 98  
 Driver, R. E., 78, 169, 170, 176, 177, 180  
 Druckman, D., 165  
 Druen, P. B., 63, 70  
 Duck, S., 219, 220, 221  
 Dugatkin, L. A., 20  
 Dunbar, N. E., 136, 137, 138, 139, 140, 143,  
 144, 146, 150, 152, 154, 155, 160, 233  
 Dunbar, R. I. M., 68  
 Duncan, V. J., 187  
 Duntley, J., 24  
 Dutilleul, J. P., 68

## E

Eagley, A. H., 29, 59, 60, 147  
 Eberly, M. B., 100  
 Ebesu, A., 183, 187, 191, 192, 194  
 Eden, G., 178  
 Edgley, C., 164, 165  
 Edwards, R., 25, 70

Efran, M. G., 58  
 Eglund, K. I., 82, 114  
 Eibl-Eibesfeldt, I., 23, 26, 80  
 Eisenberg, N., 68  
 Ekman, P., 6, 26, 28, 109, 114, 119, 121, 130,  
 163, 167, 170, 171, 175, 177, 178, 180,  
 182, 184, 188  
 Elaad, E., 169  
 Ellsworth, P. C., 23, 114, 157  
 Ellyson, S. L., 143, 157  
 Eloy, S. V., 117, 124, 125, 152  
 Epstein, J. A., 188, 189  
 Erbert, L. A., 33, 227, 228  
 Ervin, K. A., 143  
 Escudero, V., 157  
 Etcoff, N., 18  
 Exline, R. V., 143, 157, 176

## F

Fahey, W. E., 191  
 Falbo, T., 134, 138, 139, 146, 149, 149, 160, 233  
 Farace, R. V., 134  
 Fauss, R., 72  
 Feeley, T. H., 173, 179, 181, 188  
 Feeney, J. A., 110, 123, 131, 205, 207, 212, 213,  
 217, 218, 236, 237  
 Fein, O., 177  
 Feingold, A., 50, 60  
 Feinman, S., 74  
 Feldman, C., 186, 191  
 Feldman, R. S., 134, 137  
 Feldman, S. D., 68  
 Felmlee, D. H., 137, 138, 139, 160  
 Fernald, A., 92  
 Festinger, L., 37  
 Fincham, F. D., 123, 124, 125, 215, 229  
 Fingarette, H., 163  
 Fink, B., 25  
 Fireston, I. J., 151  
 Fischer, S. A., 182  
 Fishman, P., 147  
 Fitness, J., 111  
 Fitzpatrick, M. A., 122, 126, 127, 128, 134, 149,  
 202, 204, 230  
 Fletcher, G. J. O., 111  
 Floyd, K., 21, 29, 33, 39, 51, 85, 86, 88, 89, 90,  
 91, 92, 93, 94, 95, 96, 97, 98, 99, 100,

- 101, 103, 104, 105, 184, 185, 187, 190,  
192, 194, 195, 196, 227, 228
- Fogel, A., 92
- Folsom, A. R., 67
- Forman, R. F., 168
- Forte, R. A., 91
- Franklin, M., 71
- Friedrich, G. W., 155
- French, J. R. P., 134
- Frecker, D., 152
- Fridlund, A. J., 18, 26
- Friedhoff, A. J., 178
- Friedman, G., 148, 149, 161
- Friedman, H. S., 146, 174
- Friesen, W. V., 6, 28, 109, 114, 119, 121, 130,  
167, 170, 174, 175, 177, 178, 180, 182,  
184, 188
- Frieze, I. H., 140, 157
- Frijda, N. H., 108, 109
- Fritz, J. G., 179
- Fuchs, D., 30
- Fujiwara, O., 178
- Furedy, J. J., 168
- Furi, S., 76
- Furlow, B. F., 64
- Furnham, A., 25, 200
- G**
- Gabrielidis, C., 155
- Gaelick, L., 123, 126, 127, 217, 230
- Gallois, C., 49, 155
- Galton, F., 73
- Galvin, K. M., 199
- Gamble, M., 210
- Gamble, T. K., 210
- Gangestad, S. W., 20, 64, 65, 70, 74, 76
- Gapstur, S. M., 67
- Garcia, S., 59
- Garfinkel, P. E., 66
- Garner, D. M., 66
- Gehrlein, T. M., 58
- George, J. F., 194
- Gesten, E. L., 122
- Gibb, J. F., 210
- Gier, J. A., 101
- Gifford, R., 32, 33, 153
- Gilbert, D. T., 173, 182
- Giles, H., 46, 47, 48, 49
- Giles-Sims, J., 34
- Gill, G. W., 74
- Gillespie, D. L., 144
- Gillis, J. S., 67, 68
- Ginton, A., 169
- Giuliano, T., 182
- Givens, D. B., 80, 81, 82
- Goffman, E., 152, 172
- Goldberg, M. L., 175
- Goldsmith, D. J., 128
- Goldwater, B. C., 176
- Gomes, M., 134
- Gore, K. E., 95
- Gotjamanos, E., 34
- Gottman, J. M., 109, 110, 115, 118, 119, 123,  
124, 126, 128, 138, 157, 199, 205, 207,  
209, 210, 211, 213, 214, 215, 217, 218,  
219, 223, 230, 236, 237, 238
- Gonso, J., 213
- Gough, H. G., 97
- Gould, C. L., 67
- Gould, J., 67
- Gouldner, A. W., 227
- Grady, J. M., 25, 70
- Gramata, J. F., 91
- Grammer, K., 25, 70, 76
- Gramzow, R., 207
- Grandpre, J., 33, 187, 188, 194
- Gray-Little, B., 138, 157
- Graziano, W. G., 68
- Green, C. R., 189
- Greene, J. O., 39, 42, 170, 174, 179, 180
- Grice, H. P., 182
- Grieser, D. L., 18
- Gross, M. A., 205, 206
- Groth, G., 24, 25
- Gruss, J. J., 76
- Gruzen, J., 70
- Guacci-Franco, N., 108
- Gudykunst, W. B., 6
- Guerrero, L. K., 5, 39, 41, 42, 43, 46, 89, 108,  
109, 110, 113, 114, 115, 116, 117, 118,  
119, 120, 121, 122, 124, 125, 126, 129,  
149, 153, 186, 191, 203, 205, 206, 207,  
210, 212, 213, 214, 221, 229
- Gumpert, P., 176
- Gur, R. C., 164
- Gurevich, M., 168
- Gustafson, L. A., 169
- Gustell, L. M., 150

Gutierrez, E., 157  
 Guy-Grand, B., 67  
 Guyton, A. C., 176

## H

Haas, S. M., 128  
 Habbema, J. D. F., 67  
 Hadiks, D., 180  
 Hahlweg, K., 215  
 Hairfield, J. G., 186  
 Halberstadt, A. G., 28, 101, 102, 146, 161  
 Hale, J. L., 23, 31, 34, 35, 39, 87, 89, 133, 150,  
 152, 157, 231  
 Hall, E. T., 9, 101  
 Hall, J. A., 8, 122, 126, 145, 146, 147, 148, 149,  
 161, 163  
 Hallam, M. J., 62, 69, 73  
 Halone, K. K., 100  
 Hamel, R. F., 176  
 Hamermesh, D. S., 58  
 Hamilton, W. D., 19  
 Hample, D., 166  
 Hansen, E. W., 21  
 Harling, C. A., 70  
 Harlow, H. F., 21  
 Harlow, M. K., 21  
 Harrigan, J. A., 91  
 Harris, J. R., 34  
 Harrison, A. A., 179  
 Harrison-Speake, K., 102  
 Harsztrak, J. J., 181  
 Hart, R. P., 155, 170, 174  
 Hartz, A. J., 67  
 Harwood, K., 73  
 Hatfield, E., 24, 74, 121, 127  
 Hause, K. S., 128  
 Hazelton, V., 152  
 Healey, J. G., 104  
 Heavey, C. L., 148, 218, 232  
 Hecht, M. L., 5, 111, 112, 113, 229  
 Hecker, M. H., 178  
 Heider, F., 31  
 Heilveil, I., 179  
 Heisterkamp, B., 41, 43, 46  
 Helgesson, O., 67  
 Henley, N. M., 140, 142, 143, 144, 145, 149,  
 160, 232  
 Henson, A., 23, 157  
 Henton, J. M., 208

Herman, C. P., 143  
 Hess, E. H., 75, 176  
 Hess, J. A., 100  
 Hewitt, J., 142  
 Heyman, R. E., 124  
 Hickey, C. B., 176  
 Higgins, D. S., 134  
 Hill, K., 72  
 Hirsch, A. R., 3, 76, 176  
 Hocker, J. L., 200, 202, 204, 205, 206  
 Hocking, J. E., 171, 174, 175, 176, 178, 184,  
 185, 186  
 Hodgins, H., 78  
 Hoffman, G. E., 101  
 Hoffman, L. W., 34  
 Hogan, M. B., 142  
 Hogan, R., 110  
 Hollandsworth, J. G., 158  
 Hook, L. H., 142  
 Hopper, R., 95  
 Horgan, T. G., 126  
 Horowitz, S. W., 168  
 Horvath, F. S., 169  
 Hotaling, G. T., 208  
 Howard, J. A., 138, 148, 233  
 Hume, D. K., 70  
 Hunsaker, F., 182, 183, 192  
 Hunt, R. C., 174  
 Huntley, H. E., 65, 66  
 Hurd, K., 126  
 Huston, T., 135, 136, 144  
 Hwalek, M., 179

## I

Iacono, W. G., 168, 169  
 Ickes, W., 59  
 Inbar, G. F., 178  
 Infante, D. A., 157, 216  
 Inman, C. C., 94  
 Iwawaki, S., 70  
 Izard, C. E., 119, 120

## J

Jackson, L. A., 68, 143  
 Jackson, R. H., 179  
 Jacobson, N. S., 109, 138, 217  
 Jacobson, R. C., 176

Janik, S. W., 175  
 JCO Interviews, 65  
 Jefferson, Y., 71  
 Jenkins, V. Y., 70  
 Jerry, D., 101  
 John, R. S., 207, 208, 210, 211, 212, 213, 216, 217  
 Johnson, D., 101  
 Johnson, M. L., 89, 90, 133, 134, 135, 136, 150, 151, 152, 154, 156  
 Johnson, M. P., 202, 203, 204, 205  
 Johnson, P., 46, 49  
 Johnson-Laird, P. N., 127  
 Johnston, L., 58, 71  
 Johnston, V. S., 71  
 Jones, D., 71, 72  
 Jones, E., 49  
 Jones, S. E., 129, 151  
 Jones, S. M., 39, 42, 121, 122, 129, 153, 212, 221  
 Jones, T. S., 207  
 Jordan, A., 152  
 Jorgensen, P. F., 42, 46, 117

## K

Kalakanis, L. E., 62, 69, 73  
 Kalbfleisch, P. J., 173, 182, 186, 187, 188  
 Kaplan, E. P., 177  
 Karbaat, J., 67  
 Karney, B. R., 123, 218  
 Kawai, M., 92  
 Kaye, S. A., 67  
 Keating, C. F., 23, 135  
 Keely-Dyreson, M. P., 180  
 Keller, H., 26  
 Kellerman, K., 181  
 Kelley, D. L., 180  
 Kelley, H. H., 199  
 Kelly, A. B., 123, 124, 125, 215, 229  
 Kendon, A., 81  
 Kenny, D., 126  
 Kenrick D. T., 24, 25, 26, 74, 143, 153  
 Kerksen-Griep, J., 184  
 Kilmann, R. H., 203, 204, 205, 206  
 Kim, H. J., 185, 194  
 Kim, Y., 59  
 Kimble, C. E., 91, 145, 147, 153  
 King, C. A., 25  
 King, C. E., 84

Kircher, J. C., 168  
 Kirchler, E., 123  
 Kirk, C. T., 184, 191  
 Kirkendoll, S. E., 188, 189, 194  
 Kirkpatrick, C., 58  
 Kirschner, M. A., 67  
 Kirson, D., 110, 111, 114, 116, 119, 207, 236  
 Klein, J., 76  
 Klein, R. C. A., 202, 203, 204, 205  
 Kleinke, C. L., 144  
 Knapp, M. L., 8, 95, 155, 163, 169, 170, 174, 199, 219, 220  
 Kobylansky, E., 64  
 Koch, P. T., 133, 134, 135, 136, 150, 151, 152, 154, 156  
 Koeppl, L. B., 113  
 Koerner, A. F., 122, 126, 127, 128, 230  
 Koeslag, J. H., 73, 74  
 Koeslag, P. D., 73, 74  
 Koestner, R., 182  
 Kohn, M., 151  
 Köhnken, G., 180  
 Kollock, P., 138, 144, 148, 160, 233  
 Kolrumaki, J., 126  
 Komter, A., 135  
 Koper, R. J., 121  
 Koval, J. E., 208  
 Kowalski, R. M., 121  
 Kramarae, C., 145, 232  
 Krauss, R. M., 158, 189  
 Kraut, R. E., 174, 176  
 Krokoff, L. J., 215  
 Krotkiewski, M., 67  
 Krull, D. S., 173, 182  
 Ksionzky, S., 152  
 Kubany, E. S., 207  
 Kuhl, P. K., 18  
 Kuhlenschmidt, S., 59  
 Kuipers, P., 109  
 Kuroda, I., 178  
 Kurtzberg, R. L., 178

## L

Ladyszewsky, R., 34  
 LaFrance, M., 145  
 Lamb, T. A., 144  
 Langlois, J. H., 21, 59, 62, 69, 70, 73, 74  
 Langton, S. R. H., 2  
 Lanier, K., 189, 190, 194



Lapidus, L., 67  
 Larkey, L. K., 111, 112  
 Larrance, D. T., 78, 163  
 Larsen, R. J., 64  
 Larson, A. D., 62, 69, 73  
 Larsson, B., 67  
 Lashley, B. R., 184, 191  
 Lassiter, G. D., 172, 176, 177, 187, 189  
 Lauterback, K., 134  
 La Valley, A., 207, 213  
 Lavancy, M., 25  
 Lave, J., 29  
 Law Enforcement Associates, 178  
 Layne, C., 218  
 Lazarus, R. S., 109, 114, 116  
 Le Poire, B. A., 32, 33, 34, 35, 39, 42, 46, 47,  
 48, 49, 88, 152, 155  
 Leary, M. R., 121  
 Leathers, D. G., 7, 8, 171, 174, 175, 176, 178  
 Lee, H. K., 70  
 Lee, J. W., 89, 210  
 Lee, K. J., 25, 70  
 Leffler, A., 144  
 Leinster, S. J., 65  
 LeMay, C. S., 189  
 Lemerise, E. A., 30  
 Lenga, M. R., 144  
 Leonard, K. E., 207, 219  
 Levenson, R. W., 3, 205, 214, 215  
 Levine, T. R., 181, 182, 184, 192, 193, 194  
 Levinson, P., 166  
 Levitt, M. J., 108  
 Levy, H. S., 68  
 Li, N. P., 25  
 Lindstedt, G., 67  
 Ling, X., 68  
 Linkey, H. E., 151, 152  
 Linsenmeier, J. A. W., 25  
 Lipets, M., 126  
 Lipowicz, A., 68  
 Lippa, R., 32, 33  
 Lippold, S., 59  
 Liss, B., 152  
 Littig, L. W., 96, 97, 103, 104  
 Livio, M., 65, 66  
 Livshits, G., 64  
 Lloyd, S. A., 157, 159, 199, 208, 216, 217  
 Loewenfeld, I. E., 176  
 Long, B., 143, 157  
 Longo, L. C., 59, 60  
 Loveless, S. C., 108  
 Lowenstein, O., 176

Lubow, R. E., 177  
 Lucas, N., 169  
 Lucic, K. S., 91  
 Luis, S., 66  
 Lundberg, P. A., 67  
 Lustig, M. W., 154, 221, 222  
 Lynch, J. M., 149  
 Lynn, M., 68

## M

Major, B., 149  
 Makhijani, M. G., 59, 60  
 Malamuth, N. M., 218  
 Malone, P. S., 182  
 Malthus, T. R., 18  
 Manaugh, T. S., 179  
 Manke, M., 111, 113  
 Manning, J. T., 46, 65  
 Manusov, V., 31, 39, 46, 184, 212  
 Maple, T. L., 23  
 Marcus, D. L., 72  
 Maret, S. M., 70  
 Margolin, G., 207, 208, 210, 211, 212, 213, 216,  
 217  
 Margolis, C., 91  
 Markman, H. J., 123, 213, 214  
 Marschall, D. E., 207  
 Marsh, P., 31  
 Marshall, L. L., 159, 208, 209, 236  
 Marston, P. J., 111, 112, 113, 229  
 Marston, W. M., 168  
 Martin, J., 165  
 Matarazzo, J. D., 179  
 Mathes, E. W., 25  
 May, K. A., 72  
 Mayer, J. D., 122  
 Mazur, A., 66, 135  
 McArthur, L. Z., 72  
 McCauley, C., 168  
 McClellan, P., 70  
 McClelland, A., 25  
 McClintock, C. C., 174  
 McCornack, S. R., 174, 181, 182, 183, 184, 185,  
 190, 192, 193, 194  
 McCracken, G., 30  
 McCroskey, J. C., 98, 99, 144  
 McDaniel, E., 102  
 McDaniel, S., 111, 113  
 McDonald, G. W., 133

McGuire, M., 64  
 McHugh, M. C., 140, 157  
 McIntosh, W. D., 59  
 McLaughlin, M. L., 169, 173, 174  
 McLean, I., 74  
 Mealy, L., 70  
 Meeker, F. B., 144  
 Mehrabian, A., 2, 143, 152, 156, 158, 174, 179  
 Merck, C., 67  
 Mesquita, B., 114  
 Messman, S. J., 118, 128, 199, 200, 201, 202,  
 204, 206, 211  
 Metts, S., 130, 164, 165, 166, 213, 221, 222  
 Miczo, L. A., 100  
 Miczo, N., 49  
 Mikkelson, A. C., 99, 100  
 Millar, F. E., 134, 201  
 Millar, K., 181, 185, 188  
 Millar, M., 181, 185, 188  
 Miller, G. R., 134, 173, 177, 179, 183, 184, 185,  
 186, 192, 194  
 Miller, J. K., 25  
 Mineo, P., 31, 39  
 Mitchell, G., 23  
 Miyake, K., 78  
 Mohr, T., 207  
 Møller, A. P., 64, 65, 74  
 Mongeau, P. A., 185  
 Montagne, Y., 113  
 Montemayor, R., 100  
 Montgomerie, R., 70  
 Montpare, J. M., 70  
 Moore, M. M., 80, 81  
 Morman, M. T., 21, 29, 86, 93, 95, 96, 98, 99,  
 101, 103, 104, 105  
 Morr, M. C., 103  
 Morris, D., 31, 90, 210  
 Morse, S. J., 70  
 Motley, M. T., 9, 10, 14  
 Mouton, J. S., 202, 203, 204, 205  
 Muehleman, J. T., 179  
 Mulak, A., 46, 49  
 Mullen, P. E., 115, 117  
 Mullett, J., 165  
 Muraoka, M. Y., 207  
 Murphy, S. T., 61  
 Murray, E., 68  
 Murstein, B. I., 61  
 Musgrove, J. I., 145, 147, 153  
 Musselman, L., 73, 74  
 Musser, L. M., 68

**N**

Narvaez, M., 101  
 Neuliep, J., 27  
 Newton, D. A., 2, 27, 31, 32, 39, 91, 180, 184,  
 202, 203, 204, 210, 212, 217, 236, 237  
 Niedenthal, P. M., 61  
 Nierenberg, G. I., 3  
 Nishitani, M., 74  
 Noller, P., 13, 97, 110, 122, 123, 126, 127, 128,  
 131, 205, 207, 212, 213, 217, 218, 230,  
 236, 237  
 Norton, R., 153  
 Notarius, C. I., 123, 213, 214

**O**

O'Brien, T. P., 189, 194  
 O'Connor, C., 110, 111, 114, 116, 119, 207, 236  
 O'Grady, K. E., 59  
 O'Hair, H. D., 113, 169, 171, 173, 174, 178, 179,  
 180  
 O'Leary, K. D., 123  
 O'Leary, M. J., 155  
 O'Malley, C., 2  
 O'Shaughnessy, M., 31  
 O'Sullivan, M., 170, 175, 178, 182  
 Oatley, K., 127  
 Ohala, J. J., 91  
 Oka, S., 176  
 Okamura, N., 178  
 Olmstead, G., 164, 165  
 Olson, K., 92  
 Omar, A., 184, 191  
 Omdahl, B. L., 109  
 Oring, E., 95  
 Orne, M. T., 168, 169  
 Oshinsky, J. S., 114  
 Osmun, R. W., 182  
 Oster, H., 26  
 Ota, H., 49  
 Ouwehand, I. J., 67  
 Owen, W. F., 85

**P**

Paepke, A. J., 76  
 Pak, A. W., 60  
 Palmer, M. T., 88, 91

- Papa, M. J., 202, 203, 204, 205, 206  
 Park, H. S., 181  
 Parker, D. A., 122  
 Parks, A., 169  
 Parks, M. R., 94, 183, 185, 190  
 Parrott, W. B., 118  
 Parry, D., 203, 211, 236, 237  
 Patrick, C. J., 168, 169  
 Patterson, E., 58  
 Patterson, M. L., 39, 51, 52, 53, 54, 91, 150,  
 152, 156, 211  
 Patzer, G. L., 61  
 Pawlowski, B., 68  
 Pearce, W. B., 156  
 Pelham, B. W., 173  
 Pellegrini, R. J., 74  
 Penton-Voak, I. S., 25, 70  
 Peplau, L. A., 134, 137, 138, 146, 148, 149, 233  
 Perper, T., 81  
 Perras, M. T., 221, 222  
 Perrett, D. I., 25, 70, 72  
 Perse, E. M., 100  
 Peterson, C., 205, 236, 237  
 Pfau, M., 152, 156, 212  
 Pfeiffer, R. L., 181  
 Philhower, C. L., 69  
 Philippot, P., 114  
 Philpott, J., 221  
 Pierce, C. A., 135, 136, 143  
 Pike, C. L., 71, 72, 74, 217  
 Pinto, R. P., 158  
 Pitre, U., 184, 191  
 Planalp, S., 3, 109, 125, 130  
 Plumitallo, D., 60  
 Podlesny, J. A., 168  
 Poe, D., 174  
 Pollard, J. S., 73  
 Pomerantz, S. D., 195  
 Pomiankowski, A., 64  
 Porterfield, A. L., 126, 128, 230  
 Potter, J. D., 67  
 Poulloit, M., 66  
 Powell, E., 143  
 Price, R. A., 61  
 Prineas, R. J., 67  
 Proffitt, F., 25, 70  
 Prudhomme, D., 66  
 Pruitt, D. G., 202, 203, 204, 205  
 Putnam, L. L., 202, 203, 205
- R**
- Rahim, M. A., 202, 203, 204, 206  
 Raison, J., 67  
 Ramesh, C., 185, 194  
 Rane, T. R., 89, 98  
 Raney, D. R., 179  
 Rapson, R. L., 127  
 Raskin, D. C., 168  
 Raven, B., 134  
 Ray, G. B., 88, 91, 92  
 Raza, S. M., 59  
 Read, D., 152  
 Rebuffé-Scrive, M., 67  
 Reed, R. M., 25  
 Reeder, H., 111, 113  
 Reeves, D. L., 101  
 Regan, P. C., 101, 111  
 Reid, J. E., 169  
 Reid, P. T., 102  
 Reilly, M. E., 149  
 Reis, H. T., 70  
 Reiter, R. L., 119, 120, 126  
 Remland, M. S., 140, 142, 143, 158  
 Revenstorf, D., 215  
 Rhodes, G., 25, 70, 73, 74  
 Richard, D. C., 207  
 Richmond, V. P., 98, 99, 144  
 Ricketts, R. M., 66  
 Riedl, B. I. M., 72  
 Rieser-Danner, L. A., 59, 70  
 Riggio, R. E., 122, 126, 174, 182, 186, 187  
 Rikowski, A., 76  
 Rimé, B., 114  
 Rimm, A. A., 67  
 Rinck, C. M., 101  
 Ritter, J. M., 21, 70  
 Robers, T., 111  
 Roberts, A. R., 63, 70  
 Roberts, J. V., 143  
 Roberts, L. J., 207, 215, 219  
 Roberts, N., 110, 123, 131, 207, 212, 213, 217  
 Robey, E. B., 147  
 Rockwell, P., 183, 191, 192, 194  
 Rodin, J., 118  
 Rogers, L., 134  
 Rogers, L. E., 157, 201  
 Rogers, M. A., 203, 211, 236, 237  
 Roggman, L. A., 59, 61, 70, 73, 74  
 Roiger, J. F., 149

Rollins, B. C., 133, 137, 138  
 Roloff, M. E., 144, 204  
 Roman, L., 181  
 Roseman, I. J., 116, 119, 210  
 Rosen, S., 68  
 Rosenfeld, H. M., 91  
 Rosenkrantz, J., 189  
 Rosenthal, R., 39, 126, 163, 167, 170, 171, 172,  
 173, 176, 177, 182, 187, 189, 190, 193  
 Ross, W. D., 67  
 Roth, K., 68  
 Rothman, A. J., 118  
 Rouse, C., 222  
 Rowland, D. A., 25, 70  
 Rubenstein, A. J., 62, 69, 73  
 Rubenstein, L., 178  
 Rubin, R. B., 100  
 Rudd, J. E., 157, 216  
 Rule, B. G., 151  
 Rupley, D. C., 67  
 Rushe, R. H., 109, 217  
 Rutherford, D., 125  
 Ruzzene, M., 123, 126

## S

Saarni, C., 109, 130  
 Sabatelli, R., 126  
 Sabourin, T. C., 216  
 Sackeim, H. A., 163  
 Sadalla, E. K., 24, 25, 74, 143, 153  
 Safilios-Rothschild, C., 137  
 Sagrestano, L. M., 148, 161, 218, 232, 233  
 Saitta, M. B., 146  
 Salovey, P., 118, 122  
 Salt, R. E., 101  
 Samojilik, E., 67  
 Sanftner, J., 207  
 Saxe, L., 168  
 Schaap, C., 215  
 Schefflen, A. E., 80, 154, 158  
 Scheib, J. E., 24, 70  
 Schell, N. J., 138, 143  
 Scherer, K. R., 32, 108, 109, 114, 119, 120, 121,  
 177, 178, 180, 210  
 Schindler, L., 215  
 Schmidlin, A. M., 149  
 Schmitt, D. P., 24  
 Schoelmerich, A., 26  
 Schwartz, B., 143  
 Schwartz, D., 66  
 Schwartz, J., 110, 111, 114, 116, 119, 207, 236  
 Schwartz, P., 138, 144, 148, 149, 160, 233  
 Schwarz, N., 108  
 Scott, L., 95  
 Scutt, D., 65  
 Seebeck, T., 76  
 Segall, M. H., 135  
 Segrin, C., 110, 119, 120, 151  
 Seidell, J. C., 67  
 Seltzer, A. L., 176  
 Semic, B. A., 116, 124, 213  
 Semin, G. R., 180, 188  
 Sereno, K. K., 116, 207  
 Shackelford, T. D., 24, 64, 117  
 Shaffer, D. R., 68  
 Shahani-Denning, C., 58, 60  
 Shannon, E. A., 216  
 Shapiro, A. K., 59  
 Shapiro, E., 59  
 Shaver, P. R., 110, 111, 114, 116, 119, 207, 236  
 Sheehan, G., 206, 236, 237  
 Sheldon, W. H., 63  
 Shenk, J. L., 205, 218  
 Shepard, C. A., 46, 47, 48, 49  
 Sheppard, J. A., 68  
 Shlien, J. M., 176  
 Shortt, J. W., 109  
 Shulman, G. M., 155  
 Shurgot, B. A., 68  
 Shute, B., 92  
 Sieburg, E., 213  
 Siegert, J. R., 199  
 Sillars, A. L., 202, 203, 204, 211, 217, 236, 237  
 Simmons, K. B., 88  
 Simon, E. P., 123  
 Simon, T., 92  
 Simonsen, M. M., 135, 136  
 Simpson, J. A., 20, 26  
 Singer, I., 65  
 Singh, D., 25, 64, 66  
 Skaggs, L. M., 189, 191  
 Sleight, C., 185  
 Smith, C. A., 109  
 Smith, D. E., 101  
 Smith, E., 59  
 Smith, G. A., 178  
 Smith, J. K., 122  
 Smith, R. H., 118

Smith, R. L., 65  
 Smith, S. M., 59  
 Smoot, M. T., 62, 69  
 Solomon, D. H., 23  
 Sommer, R., 142  
 Sorrentino, R. M., 144, 153  
 Spinoza, B., 182  
 Spitz, R., 21  
 Spitzberg, B. H., 82, 114, 116, 117, 122, 124,  
 125, 158, 159, 203, 205, 209, 213  
 Sprecher, S., 74, 137, 138  
 Stafford, L., 123, 128, 230  
 Stamp, G. H., 199  
 Staneski, R. A., 144  
 Stang, D. J., 144  
 Stass, J. W., 75  
 Steil, J. M., 135  
 Stelzner, M. A., 114  
 Stern, D. N., 39  
 Stern, L. A., 38, 39, 46, 49, 51  
 Stevens, K. N., 178  
 Stevens, S. S., 63  
 Stier, D. S., 149  
 Stiff, J. B., 183, 185, 192, 194  
 Stinson, L., 59  
 Stoddard, J. T., 73  
 Stone, J. I., 172, 176, 177, 187, 189  
 Stone, K., 68  
 Strathman, A. J., 68  
 Straus, M. A., 34, 208  
 Streeter, L. A., 158  
 Strodtbeck, F. L., 142  
 Struening, E., 59  
 Strzyzewski, K. D., 182, 183, 191, 192  
 Studely, L. B., 49  
 Sugarman, D. B., 34, 208  
 Sumich, A., 25, 70, 74  
 Summers, L., 69  
 Sundstrom, E., 142  
 Swaim, G. W., 186  
 Swain, D. B., 21  
 Swain, S., 94  
 Swann, W. B., 182  
 Swartz, T. S., 116, 119, 210  
 Symons, D., 63

## T

Tang, J., 187, 189, 194  
 Tangney, J. P., 207

Tate, C. S., 102  
 te Velde, E. G., 67  
 Tecce, J. J., 176  
 ter Schure, E., 109  
 Tesser, A., 143  
 Texter, L. A., 181  
 Thackray, R. I., 169  
 Thakerar, J. N., 49, 70  
 Thayer, S., 88  
 Thelen, M., 30  
 Thibaut, J., 176  
 Thieme, A., 222  
 Thomas, K., 169  
 Thomas, K. W., 203, 204, 205, 206  
 Thompson, M., 66  
 Thorndike, E., 28  
 Thornhill, R., 25, 64, 65, 70, 74, 76  
 Throckmorton, D., 182, 186, 187  
 Timmerman, L. M., 122, 124  
 Ting-Toomey, S., 6, 217  
 Toda, S., 92  
 Todd-Mancillas, W. R., 75  
 Tolhuizen, J. H., 123  
 Tonkelaar, I., 67  
 Tooke, W., 24, 25  
 Toris, C., 194  
 Townsend, G., 70  
 Trees, A., 212, 221  
 Tremblay, A., 66  
 Tremewan, T., 73  
 Trivers, R. L., 22, 24, 46  
 Trost, M. R., 24, 25, 108, 116, 117, 155  
 Trotta, M. R., 85  
 Trout, D. L., 91  
 Tsai-Ding, L., 70  
 Tucker, J., 182, 186, 187  
 Tucker, J. S., 146  
 Tucker, S., 63  
 Tully, T. B., 144  
 Turner, R. E., 164, 165  
 Tusing, K. J., 91, 99, 100

## U, V

Utsuki, N., 178  
 van Noord, P. A. H., 67  
 Van Valen, L., 64  
 Vandenberg, S. G., 61  
 Vangelisti, A. L., 199, 213, 219, 220  
 Vaughn, L. S., 70  
 Veccia, A. M., 149

Vershure, B., 74, 143, 153  
 Vincent, J. P., 123  
 Vogel, B., 215  
 Vogel, D. L., 218  
 Voloudakis, M., 39, 97  
 von Bismark, G., 178  
 Vrieswijk, B., 67  
 Vrij, A., 179, 180, 181, 188  
 Vygotsky, L. S., 28

## W

Wadleigh, P. M., 47  
 Wagner, P. E., 207  
 Waid, W. M., 168  
 Walker, A. J., 158  
 Walker, M., 152  
 Wallace, A. R., 18  
 Wallace, D. H., 96  
 Wallbott, H. G., 109, 114, 119, 210  
 Waller, W., 137  
 Walster, E., 58, 61  
 Walster, G. W., 61  
 Walther, J. B., 35, 39, 89, 184, 181, 182, 186  
 Waltz, J., 138  
 Wampold, B. E., 217  
 Wang, X. T., 178  
 Ward, R., 67  
 Watkins, L. M., 58  
 Webbink, P., 175  
 Wedekind, C., 76  
 Weisfeld, C. C., 138, 143  
 Weisfeld, G. E., 152  
 Weiss, R. L., 123, 124, 200, 207, 211, 212, 213  
 Weissberg, R. P., 122  
 Welch, M., 116, 207  
 Wellens, A. R., 175  
 Weltman, K., 135  
 Wenger, E., 29  
 Wertin, L., 46  
 West, S. G., 59  
 Wheeler, L., 59  
 Wheldall, K., 92  
 White, A., 205, 218  
 White, C., 180, 187, 191, 182, 184  
 White, G. L., 61, 115, 117  
 Whitehouse, G. H., 65  
 Widaman, K. F., 186  
 Wiegele, T. C., 178  
 Wiemann, J. M., 144  
 Wiemann, J. W., 49  
 Wiens, A. N., 179  
 Wiest, C., 116, 119, 210  
 Wiggers, M., 119  
 Williams, C. E., 178  
 Williams, G. C., 19  
 Williams, L., 149  
 Williams, S. J., 101  
 Willis, F. N., 75, 101, 102, 142, 149  
 Wilmot, W. W., 200, 212, 204, 205, 206, 217  
 Wilson, B. J., 108  
 Wilson, C. E., 202, 203, 205  
 Wilson, E. O., 22  
 Wilson, M., 22, 104  
 Winke, T., 202, 204  
 Winkler, B. A., 182  
 Witt, D. S., 34  
 Witteman, H., 149  
 Wolf, C. J., 176  
 Wolfson, L. R., 182  
 Wood, J. T., 94, 145  
 Wood, W., 147  
 Woodall, W. G., 3, 4, 5, 7, 8, 11, 23, 26, 54,  
 150, 151, 152, 153, 154, 155, 156, 157,  
 174  
 Woodin, E., 214, 215  
 Woods, N., 147, 148, 233  
 Wu, C., 63, 70  
 Wyer, M. M., 188  
 Wyer, R. S., 123, 126, 127, 217, 230

## Y

Yarbrough, A. E., 129, 152  
 Yen, C., 170, 174, 179, 180  
 Yoshikawa, J. C., 91  
 Yoshikawa, S., 72, 73  
 Yoshimura, S. M., 116, 117  
 Young, M. J., 173, 181, 188  
 Young, R. K., 25, 66

## Z

Zaadstra, B. M., 67  
 Zajonc, R. B., 61  
 Zebrowitz, L. A., 70, 92  
 Zimmerman, R. R., 21  
 Zormeier, M. M., 82  
 Zuckerman, M., 78, 126, 163, 167, 169, 170,  
 171, 172, 173, 176, 177, 180, 182, 187,  
 188, 190, 193, 195

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# Subject Index

## A

accommodating strategy, 204–205  
action tendencies, 109, 114, 116  
adaptors, 86, 121, 153, 180, 186, 203, 211, 212, 236, 237  
affect, 108  
affection, 84–106, 212, 227–228  
affection exchange theory, 103  
affectionate behavior  
  as related to disengagement, 219–220  
  as related to jealousy, 117  
  contextual characteristics of, 104–105  
  differences as a function of relationship type, 102–106  
  direct affection behavior, 86, 87–93, 98–99, 103  
  idiomatic affectionate behavior, 86, 97–99, 103  
  indirect affection behavior, 86, 97–99, 103  
  implications for future research, 227–228  
Affectionate Communication Index, 86  
affectionate emotion, 110–114, 126–127, 217–218, 229  
affective states, 108  
affiliation, 23, 87, 110, 145, 146, 236  
age, 100–102, 126, 149  
aggression, 30, 116, 117, 118, 124, 149, 199, 203, 207, 208, 214, 216–217, 218, 220, 229, 231, 232  
Alcott, Louisa May, 1

altruism, 22  
American Sign Language, 7  
analogic processing, 67  
anger, 23, 108, 110, 114, 116, 123, 124, 125, 131, 158, 169, 207, 209, 229  
anxiety, 110, 170, 179  
appearance- see *physical appearance*  
appraisal theory of emotion, 109  
architectural features, 9  
argumentative behavior, 216–217  
arousal, 39–40, 42–43, 55, 108, 167–170, 174, 176, 178, 179, 184, 203, 210, 236  
articulation- see *vocal qualities*  
artifacts, 8, 112, 115, 142  
assertiveness, 136, 207, 229  
attachment, 21, 100, 110, 121, 153  
attraction, 57–83, 153, 226–227  
attributions, 127–128  
auditory communication system, 8  
avoidance, 8, 125, 214, 216–217, 237, 238 (see also, *avoiding strategy* and *withdrawal*)  
avoiding stage of relational disengagement, 220  
avoiding strategy, 205, 211, 220–221, 222

## B

baby talk, 81, 92, 97, 103–104, 106, 113  
babyish faces, 71–72  
backchannelling, 147, 154, 172, 212



backward lean, 121, 211  
 bargaining, 200, 233  
 behavioral adaptation explanation, 192–194  
 bio-evolutionary paradigm, 18–27, 55  
   and attraction, 64–65, 66–67, 69, 70, 74, 75–76  
   and the theory of evolution, 18  
   as applied to courtship, 80  
   as related to cross-cultural similarity, 26  
   as related to emotion, 111, 118  
   assumptions of, 25–26  
 biology, 18–27, 50, 54–56 (see also, *bio-evolutionary paradigm*)  
 blinking, 5, 169, 176, 192  
 body attractiveness, 63–69  
   body type, 63–64  
   body mutilations, 68–69  
   body proportionality, 65–66  
   body symmetry, 64–65  
   waist-to-hip ratio, 25, 66–67  
 body mutilations- see *body attractiveness*  
*Body Politics*, 145  
 body relaxation- see *relaxed body*  
 breakup, 138 (see also, *relational disengagement*)

**C**

cascade model of conflict, 211  
 centrality of position, 142–143, 232  
 chilling effect, 144, 204–205  
 chronemics  
   and affectionate emotion, 112, 114  
   and hostile emotion, 115  
   and intimidation, 158  
   and power, 144  
   as a nonverbal code, 8  
 circumscribing stage of relational disengagement, 220  
 classical learning theories, 28  
 clenched fist, 116, 207, 231  
 clothing- see *dress*  
 coercion, 136, 138, 157, 160, 208, 211, 213, 216, 217–218, 233  
 cognitive appraisal, 107, 108, 109  
 collaborating strategy, 203–204, 206  
 comfort with closeness, 100  
 communication accommodation theory, 46–49, 55

communication potential of nonverbal behavior, 5, 11  
 communication skill, 230, 235 (see also, *social skill*)  
 communicative responses to jealousy, 117  
 competing strategy, 202–203, 205, 211, 222, 236  
 competition (see also, *competing strategy*)  
   and conflict, 202–203  
   for resources, 22  
   related to envy, 118  
 complaints, 211, 213  
 compliance gaining, 151, 232  
 compromise, 199, 200 (see also, *compromising strategy*)  
 compromising strategy, 206  
 concealment- see *omissions*  
 confirming communication, 213  
 conflict, 123, 126–127, 142, 198–224, 229, 235–238  
   defined, 199–201  
   strategies of, 202–206  
 Conflict Tactics Scale, 208  
 contempt, 110, 114–115, 118–119, 124, 125, 157, 208–210, 211, 215, 216, 217, 218, 222, 229, 230–231, 236–237  
 control of interaction- see *interactional control*  
 control of nonverbal behavior, 2, 3, 85, 167, 170–172, 186, 194–195  
 convergence, 46–47  
 conversational control, 232 (see also, *interactional control*)  
 conversational distance, 210, 220, 221  
 cooperative behavior, 216–217, 236  
 cost escalation, 222  
 courtship, 80–82, 90, 112, 154  
 criticism, 202, 203  
 cross-cultural similarity, 26, 62, 66, 69–70, 72, 73, 76, 85, 92, 109, 114, 165  
 cultural variability  
   in body mutilations, 68–69  
   in ratings of attractiveness, 59–60  
   in ratings of body type, 63–64  
 crying, 116, 117, 119, 129, 214

**D**

Darwin, Charles, 18, 85–86  
 Darwin, Erasmus, 18

deception, 162–197, 234–235  
 and behavior management, 171–172  
 and behavioral knowledge, 184–185  
 and image management, 172  
 and information management, 170–171  
 and informational knowledge, 184–185  
 and interactivity, 194–196  
 and motivation, 188–190  
 and relational familiarity, 183–184, 185  
 and repair behaviors, 172, 173, 192, 195  
 as tested via the social meaning model,  
 33  
 channels of, 171–172, 173, 195–196  
 cognitive strain of, 172–173  
 definition of, 163  
 detecting deception, 126, 166–169, 181–196  
 forms of deception, 164–166  
 decoding skill, 125–130, 230, 232  
 defensive posture, 124  
 defensiveness, 201, 210–211, 216, 217, 218,  
 222, 237  
 de-intensification, 130  
 demand-withdrawal sequence, 205, 210  
 depression, 100, 110, 227  
 despair, 213–214  
 differentiating stage of relational  
 disengagement, 219–220  
 digital processing, 6  
 Dindia, Kathryn, 145  
 direct body orientation, 113, 156, 204, 211  
 dirty looks, 117, 124, 207  
 discrepancy arousal theory, 39–43, 55  
 discriminative parental solicitude, 22  
 disengagement- see *relational disengagement*  
 disfluencies, 153, 186 (see also, *nonfluencies*  
 and *speech errors*)  
 disgust, 110, 114, 118–119, 124, 125, 157,  
 209–210, 214  
 display rules, 109, 130  
 dissimulation, 164  
 distributive conflict strategy- see *competing*  
*strategy*  
 divergence, 47  
 dominance, 133–161, 231–234  
 and emotion, 110  
 and the competing conflict strategy,  
 202–203  
 as a fundamental dimension of  
 communication, 133  
 as a relational theme, 23  
 defined, 135–136, 150–151  
 evolutionary explanation of, 22

interpersonal dominance versus  
 psychological dominance, 136  
 through intimidation, 157–160  
 through social skill, 150–157  
 dominant behavior, 32, 33, 91, 133–161  
 dress, 77, 111, 113, 144, 151–152  
 Duchenne smiles, 175, 215  
 dyadic phase of relational dissolution,  
 220–221  
 dynamism, 136, 140, 145, 156–157

## E

elevation, 143–144, 232  
 emblems, 7  
 embrace- see *hugs*  
 emotion, 107–132  
 and communication skill, 121–131  
 definition of, 107–109  
 emotional experience versus emotional  
 expression, 108  
 expression of, 3, 107–132, 229–231  
 emotional contagion effect, 120, 127  
 emotional flooding, 210, 217, 236–237  
 emotional intelligence, 122  
 emotional support, 128–129, 221, 222  
 encoding skill, 122–125  
 environmental cues  
 and affectionate emotion, 112  
 as a nonverbal code, 8  
 fixed feature aspects, 9  
 related to love, 112–113  
 related to power, 142  
 semi-fixed features, 9  
 envy, 110, 114, 117–118, 125  
 equality, 149–150, 231  
 equivocation, 164–165  
*Essay on the Principle of Population*, 18  
 evil eye, 118, 231  
 evolution- see *bio-evolutionary paradigm*  
 exaggeration, 164  
 excitement, 169  
 expectancy violations theory, 35–39, 108  
 (see also, *expectations*)  
 expectations, 35–39, 52, 102, 114, 154, 156,  
 182, 228, 234  
 extraversion, 32–33  
 eye contact (see also, *gaze*)  
 and affection, 87–88  
 and conflict, 204, 205, 206, 217

eye contact (*cont.*)  
 and deception, 167–169, 170, 175–176, 192, 234–235  
 and dominance, 154, 157  
 and emotion, 113, 129  
 and power, 142  
 and relational disengagement, 220, 221, 222

eyebrow raises, 80, 119, 121

## F

face touch, 89, 90, 105  
 facial animation, 87–88, 106  
 facial attractiveness, 70–74  
 and koinophilia, 73–74  
 and neotency, 71–72  
 and proportionality, 71  
 and symmetry, 70–71  
 facial averageness, 73–74  
 falsification, 164, 166  
 fear, 23, 109, 110, 116, 117, 121, 124, 167, 169, 214  
 felt smiles versus false smiles, 175  
 femininity, 33, 94, 97–98  
 fidgeting, 121, 167, 186  
 flirtation, 80–82, 113, 117  
 fluctuating asymmetry, 64, 76  
 fluency, 184, 191, 203  
 fondness, 215  
 foot binding, 68  
 forward leans, 80, 91, 129, 156, 180, 210  
 four horsemen of the Apocalypse, 211, 218  
 four-factor theory of deception, 167–173  
 frowning, 116, 119, 124, 214  
 frustration, 108  
 fundamental frequency, 91–92

## G

Galton, Sir Francis, 73  
 gaze (see also, *eye contact*)  
 and compliance-gaining, 151, 232  
 and conflict, 211, 212, 217, 236, 237  
 and deception, 175–176, 193  
 and emotion, 111  
 in courtship, 80  
 gaze aversion, 119, 121, 124, 155, 203, 205, 210

gender differences, 29, 97–100 (see also, *sex differences*)  
 grave dressing phase of relational dissolution, 221  
 gritting teeth, 116, 231  
 grooming behavior, 88  
 guilt, 109, 117, 167, 169–170

## H

hair flips, 80  
 half-truths- see *omissions*  
 halo effect, 58–60, 78, 226  
 handholding, 88, 89, 90, 101  
 handshake, 89  
 happiness- see *joy*  
 haptics, 112, 115 (see also, *tactile communication and touch*)  
 head canting- see *head tilts*  
 head nods- see *nods*  
 head shaking, 202, 210, 236  
 head tilts, 81, 113, 119, 146, 229  
 height, 67–68  
 Hepburn, Audrey, 66  
 heritable traits, 19, 55  
 hitting, 116, 159, 208  
 honeymoon stage, 229, 230  
 hostile emotion, 110, 114–119, 124, 126–127, 217–218, 229–230  
 hostility, 207, 210, 213, 216, 217, 222 (see also, *aggression and hostile emotion*)  
 hugging, 85, 86, 88, 89–90, 97, 101, 105, 129  
 hurt, 213–214  
 hurtful messages, 213–214

## I

iconic behavior, 6  
 idiomatic behavior, 86, 93–94, 106  
 illustrator gestures, 88, 138, 180, 192, 233  
 immediacy, 37–39, 43–46, 80, 91, 97, 111, 113, 129, 156, 184, 191, 212, 221  
 inclusive fitness theory, 19–20, 22  
 individual differences (see also, *personality*)  
 in affectionate behavior, 100–102  
 in deception, 186  
 in decoding ability, 126  
 in love styles, 111, 229  
 in power displays, 146

influence, 136, 140, 151–152 (see also, *persuasion* and *social influence*)  
 ingratiating cues, 134, 135, 138, 146, 151, 233  
 inhibition, 130  
 integrative conflict strategy- see *collaborating strategy*  
 intensification, 130  
 intentionality of behavior, 2, 9, 10, 11  
 interaction adaptation theory, 49–51  
 interaction position, 50  
 interactional control, 143, 144–145, 146, 154–155, 232 (see also, *conversational control*)  
 interactional model of depression, 120  
 interactivity principle, 195  
 interpersonal deception theory, 191  
 interruptions, 126, 138, 139, 140, 144, 145, 146, 147, 148, 154, 201, 211, 232, 233  
 intimacy, 23, 87–89, 105  
 intimidation, 118, 135, 136, 156–160, 231–232, 234  
 intrapsychic phase of relational dissolution, 220  
 intrinsic behavior, 6  
 introversion, 32  
 invisible communication system, 8  
 involvement behavior, 13, 32, 104, 108, 199, 205, 211, 212, 216

## J

jealousy, 110, 114–115, 116, 117, 125, 152, 229  
 joking, 165–166, 202  
 joy, 108, 109, 110, 111, 114, 122, 125, 127, 169, 183, 229

## K

Keeley, Maureen, 7  
 kinesics  
   and affectionate emotion, 112, 113  
   and conflict, 204, 210, 212, 213, 236  
   and deception, 167, 179–180  
   and dynamism, 156–157  
   and hostile emotion, 115  
   as a nonverbal code, 8  
   as related to anxiety/fear, 120  
   as related to sadness/depression, 120  
 kissing, 85, 86, 88, 89, 97, 123

knit brows, 116  
 koinophilia- see *facial attractiveness*

## L

laughter, 113, 114, 118, 121, 123, 192, 212  
 leakage, 167, 173, 176, 177, 186, 188  
 leakage hypothesis, 167  
 lean- see *forward lean* and *backward lean*  
 leave-taking behaviors, 155  
 lens model of nonverbal judgment, 32–34  
 lie accuracy, 181, 234  
 lie bias, 184  
 lie detector test- see *polygraphy*  
 liking, 87, 110, 113–114, 123, 150, 152  
 lip licks, 80  
 lip plates, 68  
*Little Women*, 1  
 Loren, Sophia, 66  
 love, 85, 89, 110, 111–113, 122, 125, 229

## M

Macpherson, Elle, 66  
 maintenance behavior, 123 (see also, *relational maintenance*)  
 major histocompatibility complex, 75–76  
 managing emotional expression, 130–131 (see also, *display rules*)  
 manipulation, 117, 118, 135, 138, 216, 233  
 Manusov, Valerie, 7  
 Marital Interaction Coding System, 212, 213  
 masculinity, 33, 97–98  
 masking, 130  
 masking smile, 175  
 matching hypothesis, 60–62  
 mate retention strategies, 117, 152  
 mate selection, 24–25  
 message orientation, 10–11  
 metacommunication, 3  
 miscommunication, 12–14  
 misinterpretation, 12–14, 125–129  
 modeling behavior, 29–30  
 Monroe, Marilyn, 66  
 motivation impairment effect, 188–190

## N

- natural selection  
 and attachment bonds, 21–22  
 and dominance, 22–23  
 and facial attractiveness, 71–72  
 and intrasexual competition, 24  
 and mate selection, 24–25  
 and social affiliation, 20  
 theory of, 18–20, 55
- negative affect, 117, 121, 122, 124, 125,  
 127–128, 130–131, 132, 138, 157,  
 169–170, 174–191, 201, 207, 210, 212,  
 213, 214–216, 230
- negative face threat, 227–228
- negative spirals, 217–218, 237–238
- nods  
 and affection, 88, 105, 231  
 and conflict, 204, 212, 213, 214, 236  
 and deception, 180  
 and emotion, 113, 119, 121  
 and emotional support, 129  
 and interpersonal dominance, 154–155  
 and power, 150  
 in courtship, 80
- nonfluencies, 121, 212 (see also, *disfluencies*)
- nonverbal communication  
 definitions of, 4–9, 11  
 perspectives on, 9–14  
 versus nonverbal behavior, 5
- nonverbal sensitivity, 145
- norm of reciprocity, 227–228 (see also,  
*reciprocity*)

## O

- obsessive relational intrusion, 158–159
- olfactics  
 as a nonverbal code, 8  
 and attraction, 75–77
- omissions, 164–166
- one cannot not communicate debate, 9–14
- onomatopoeic words, 6
- ontological primacy, 55, 56, 129
- open body position, 113, 152
- Othello error, 194

## P

- panache- see *dynamism*
- paralanguage- see *vocalics*
- paralinguistics- see *vocalics*
- parallel process model, 51–54, 56
- parental investment model, 24
- passion, 110, 111–113, 117, 169
- passive aggression, 117, 124, 205
- paternal uncertainty, 24
- patronizing communication, 208–210 (see  
 also, *contempt*)
- pauses, 179, 192
- perfume, 76–77
- personal space, 23, 142, 151
- personality, 56 (see also, *individual  
 differences*)
- persuasion, 134, 135, 138, 152, 212 (see also,  
*influence and social influence*)
- phi ratio, 65–66, 71
- phylogenetic primacy, 55, 56, 129
- physical appearance  
 and affectionate emotion, 112  
 and attractiveness, 58–61, 231  
 and compliance-gaining, 151–152, 232  
 and deception, 165  
 and hostile emotion, 115  
 and jealousy, 11  
 as a nonverbal code, 8
- physical attractiveness (see also, *body  
 attractiveness and facial attractiveness*)  
 and compliance-gaining, 152  
 and the halo effect, 58–60  
 and the matching hypothesis, 60–62  
 markers of, 62–79
- physical plane, 113, 229, 231
- pitch- see *vocal qualities*
- poise, 140, 152–154, 231
- politeness, 165–166, 212, 229
- polygraphy, 168–169, 178
- positive affect, 97, 111, 122, 127–128, 130–131,  
 132, 153, 169, 184, 214–216, 217, 222,  
 229, 230
- postural congruence, 150
- postural mirroring, 150, 231
- postural relaxation- see *relaxed body*
- postural shifts, 193
- posture, 88, 90–91, 119
- pouting, 113, 213
- power  
 definition of, 134

latent, 135  
 direct strategies of, 135, 145, 233  
 directions for new research, 231–234  
 indirect strategies of, 135, 233  
 manifest, 135  
 principles of, 142–145  
 reducing power differentials, 149–150  
 power bases, 134–135, 137, 145–146, 156  
 power imbalance, 138 (see also, *relative power*)  
 preening behavior, 113  
 pride, 108  
 primping behavior, 113  
 principle of facial primacy, 174  
 principle of least interest, 137  
 privacy, 104–105, 232  
 probing effect, 192–194  
 probing heuristic, 193–194  
 problem-solving, 203, 204, 208, 211–212, 216, 217, 220, 222, 236  
 process-based perspective, 11–14  
 proxemics  
   and affectionate emotion, 111, 112  
   and compliance-gaining, 151  
   and conflict, 210, 211, 217  
   and emotional support, 129  
   and hostile emotion, 115, 118  
   and interpersonal dominance, 152  
   and power, 142–145, 232  
   and rejection, 155  
   as a nonverbal code, 8  
   as related to affectionate behavior, 90–91  
 pupil dilation, 167, 169, 176–177 (see also, *pupil size*)  
 pupil size, 75 (see also, *pupil dilation*)  
 pursed lips, 119  
 pushing, 208

## Q

quasi-courtship, 80

## R

random movement, 152, 153, 180, 202  
 receiver orientation, 10  
 reciprocity, 38–39, 41–43, 44–46, 140, 214, 216, 217–218, 227, 230, 236, 237 (see also, *norm of reciprocity*)

reinforcement, 29–30  
 rejection strategies, 155  
 relational de-escalation- see *relational disengagement*  
 relational deterioration- see *relational disengagement*  
 relational disengagement, 85, 199, 218–223, 238 (see also *breakup*)  
   stages of, 219–221  
   strategies of, 221–223  
 relational maintenance, 84, 110, 117, 121, 122, 128, 131, 227, 229, 230, 236 (see also, *maintenance behavior*)  
 relational satisfaction, 110, 123, 124, 126, 127–128, 131, 136, 149, 199, 200, 205, 207, 213, 214–219, 229–230, 237, 238  
 relational stages, 130, 149, 219–221  
 relational transgressions, 213  
 relationship development, 84  
 relative power, 137–140, 154, 233–234  
 relaxation, 153–154, 231 (see also *relaxed body* and *relaxed expression*)  
 relaxed body, 140, 153, 203, 212, 236  
 relaxed expression, 135  
 relief, 108  
 response latencies, 119, 179, 191, 192, 193  
 reversal hypothesis, 219

## S

sadness, 109, 110, 117, 119–120, 124, 125, 131, 213, 215  
 sarcasm, 117, 119, 124, 163, 209–210, 214, 237  
 screaming, 116, 207, 208  
 self-assurance, 152–154  
 self-deception, 163  
 self-efficacy, 30  
 sex differences (see also, *gender differences*)  
   in affectionate behavior, 91–92, 94–97, 106  
   in deception, 186–188  
   in decoding ability, 126, 128  
   in emotional expression, 30  
   in encoding ability, 126, 128  
   in interpreting friendly behavior, 113  
   in mate selection, 24–26  
   in power, 135, 137, 138, 145–149, 160–161, 232–233  
 Sex Role Inventory, 98  
 sexual behavior, 80, 81, 89, 111, 113, 123, 159, 229

shoulder shrugs, 81  
 shouting, 116 (see also, *yelling*)  
 silence, 8, 157–158, 205, 207, 209  
 silent treatment, 124, 158, 205, 214, 231  
 simulation, 130, 164  
 situated learning, theory of, 29  
 skin conductance, 168–169  
 slamming doors, 116, 117, 207, 231  
 slapping, 208  
 smell- see *olfactics*  
 smiling  
     and affection, 85, 87–88, 105  
     and compliance gaining, 152  
     and conflict, 204, 206, 207, 212, 214, 220, 236  
     and deception, 170, 172, 174–175, 191, 192  
     and emotional expression, 111, 113, 114, 123  
     and power, 135, 140, 145, 146, 150, 231, 232  
     and social support, 221  
     during courtship, 80  
 sneering, 214  
 social development theory, 28–29  
 social exchange, 22  
 social expectation model, 108  
 social influence, 151 (see also *influence* and *persuasion*)  
 social learning theories, 28–31, 98  
 social meaning model, 31–34, 55  
 social phase of relational dissolution, 221  
 social role theory, 29, 147  
 social skill, 11, 121, 122, 136, 150–157, 186, 216–217, 231–232, 233–234 (see also, *communication skill*)  
 social support, 131 (see also, *emotional support* and *supportive behavior*)  
 sociocultural paradigm, 27–35, 55  
 somatyping, 63  
 source orientation, 9–10  
 speaking rate- see *vocal qualities*  
 speech errors, 169, 178–179, 192, 193 (see also, *disfluencies* and *nonfluencies*)  
 spontaneous nonverbal behavior, 9, 10  
 stagnating stage of relational disengagement, 220  
 staring, 157, 159, 207, 231  
 status, 136–137, 147–149, 154  
 stimulus response theory, 28  
 stomping, 116, 205, 207  
 stonewalling, 119, 211, 218, 237  
 subordination hypothesis, 145, 161, 232

submissiveness, 135, 136, 143, 145–146, 149, 160, 204, 232  
 successful communication, 12  
 supportive behavior, 86, 93–94, 106, 204, 212, 222  
 suspicion, 172, 173, 184, 186, 187, 190–194, 196, 234, 235  
 symbolic codes, 6, 9  
 symmetry- see *body attractiveness* and *facial attractiveness*  
 symptomatic behavior, 10, 11  
 synchronized behavior, 81

## T

tactile communication (see also, *haptics* and *touch*)  
     and power, 149  
     and violence, 160  
     as a nonverbal code, 8  
 talk time, 138, 145, 146, 147, 148, 153, 154, 203, 204, 211, 217, 220, 222, 236  
 terminating stage of relational disengagement, 220  
 territory, 23, 142  
 threat- see *intimidation*  
 tie signs, 90, 105, 220  
 time- see *chronemics*  
 touch (see also, *haptics* and *tactile communication*)  
     and affection, 85, 88–90, 101–102, 105  
     and compliance-gaining, 151, 232  
     and conflict, 210, 211, 212  
     and emotional expression, 111, 113, 123, 229  
     and emotional support, 129  
     and immediacy, 156  
     and power, 144, 145, 232  
     and relational disengagement, 220  
     and social support, 221  
     between infants and caregivers, 21  
     during courtship, 81  
     ethnic differences in, 101–102  
     in primates, 21  
 truth accuracy, 181, 234  
 truth bias, 181–182, 183–184, 190, 195, 234  
 turn-taking, 154–155, 206, 212, 217, 222  
 Twain, Mark, 173

## U

uncertainty, 199  
 unfelt smiles, 214  
 unrequited love, 159

## V

validation, 213  
 veracity effect, 181  
 violence, 117, 124, 138, 140, 157, 159–160, 208,  
     209, 214, 216–217, 219, 222, 231, 232,  
     236  
 visual dominance, 143  
 vocal attractiveness, 178  
 vocal qualities  
     articulation, 8, 78  
     loudness/volume, 91, 119, 145, 153, 155,  
        156, 157, 158, 202, 236  
     nasality, 78  
     pitch, 78, 91–92, 114, 119, 179–180, 193, 203  
     rate/tempo, 114, 119, 152, 156, 179, 191,  
        203, 210, 211, 236  
     resonance, 78  
     variance in pitch, 91–92  
     vocal relaxation, 191, 212  
     vocal stress/nervousness/tension, 178  
     vocal tone, 118, 170, 203, 205, 210, 214  
     vocal warmth, 111, 113, 123, 129, 135, 150,  
        204, 214, 229

## vocalics

and affectionate behavior, 91–93  
 and affectionate emotion, 112  
 and compliance-gaining, 152  
 and deception, 167, 177–179  
 and hostile emotion, 115  
 as a nonverbal code, 8  
 as associated with femininity and  
     masculinity, 33  
 as related to anxiety/fear, 115  
 as related to sadness/depression, 120  
 during courtship, 81

## W

waist-to-hip ratio- see *body attractiveness*  
 Wallace, Alfred Russel, 18  
 warmth, 110, 113–114, 122, 123, 204, 212–213,  
     216, 223, 229, 231, 236  
 we-ness, 215  
 whining, 210, 213, 237  
 winking, 105  
 withdrawal, 138, 199, 205, 211, 216–217, 218,  
     220 (see also *avoidance*)  
 withdrawal of social support, 221  
 Woods, Julia, 145  
 wrinkled nose, 119

## Y

yelling, 116, 117, 118, 124, 207, 208