CHAPTER

8

MESSAGE RECEPTION SKILLS
IN SOCIAL COMMUNICATION

Robert S. Wyer, Jr.
Rashmi Adaval

Hong Kong University of Science and Technology

This chapter reviews the factors that influence people’s ability to comprehend and evaluate the messages they receive. Upon first consideration, these factors may seem self-evident. For example, recipients’ ability to comprehend a message undoubtedly increases with the amount of knowledge they have already acquired about the topic at hand. However, possession of this knowledge is hardly a guarantee that recipients will interpret a message in the manner the communicator intends, or that they will evaluate the validity of the communicator’s assertion accurately. Message reception may in fact be inherently limited for two general reasons.

First, people who receive a message usually do not bring all of the potentially relevant concepts and knowledge they have acquired to bear on its interpretation (Higgins, 1996; Taylor & Fiske, 1978). Rather, they apply only a subset of this knowledge that happens to be easily accessible in memory at the time. Moreover, they are often unaware of the factors that lead them to apply one subset of knowledge rather than another (Barth, 1994, 1997). Therefore, biases can occur in recipients’ interpretation of information and their evaluation of its implications. And even when recipients recognize that their interpretation of a message might be biased, they are frequently unable to assess the magnitude of this bias accurately, and so their efforts to compensate for the bias are inaccurate.

Second, the literal meaning of a message is not always the meaning that the communicator intends to convey. Often, a message may be ironic, or may be intended to convey an attitude rather than a statement of fact. The identification of a message’s intended meaning, however, often requires not only knowledge of the topic at hand but also inferences about the communicator’s knowledge and his or her reasons for transmitting the message in question. An understanding of the communicator’s objectives, in turn, may often require inferences about what the communicator assumes concerning recipients’ own attitudes and opinions about the topic. Even when recipients have the motivation to make these inferences, the information necessary to do so is often not available.
For these reasons, it is almost impossible to draw general conclusions about the conditions in which message reception abilities are likely to have an impact. As Krauss and Chiu (1998; see also Krauss & Fussell, 1996) emphasize, communication is an interactive process. Successful message reception therefore requires an understanding of the goals and intentions of the communicator as well as the literal implications of the message being transmitted. Furthermore, it depends on which subsets of message-relevant knowledge recipients bring to bear on the message. This, in turn, may depend on the purpose for which the recipient expects to use the information being conveyed, and his or her expectations concerning the type of communications that are likely to be transmitted in the particular situation at hand.

In conveying the issues of concern in this chapter, we assume a two-stage process of the sort described generally in Fig. 8.1. That is, a recipient first construes the literal meaning and implications of a message and evaluates its consistency with expectations for the content and type of messages that are likely to be transmitted in the situation at hand. (These expectations may be based on norms of communication of a sort to be discussed presently.) If the message's meaning and implications fall within the range of those the recipient expects, the recipient assumes that the message is intended to be taken literally and responds accordingly. If, however, these expectations are violated, the recipient attempts to construe the meaning that the communicator actually intends to convey and responds on the basis of this construal instead.

The two stages of processing identified in Fig. 8.1 are elaborated in a theory of comprehension proposed by Wyer and Radvansky (1999; see also Badzinsky & Gill, 1994). In the first section of this chapter, we discuss more generally the cognitive processes that operate at each stage and the factors that influence them. Then we review the following three common types of situations in which these processes come into play and discuss more specifically the factors that influence message reception in these situations:
1. Informal conversations in which two or more persons exchange information either face-to-face, on the telephone, or through electronic mail

2. Interview situations and opinion surveys in which respondents must interpret the questions they are asked in ways that permit them to provide answers that the questioner will understand and appreciate

3. Situations in which messages are received by a general audience that has not requested the information being transmitted and does not have to respond to it

Although the two stages of processing shown in Fig. 8.1 come into play in all three types of situations, existing research has given differential emphasis to these stages. Research on the exchange of information in conversations, for example, has largely concerned the second stage of processing (i.e., people's perceptions of the intended meaning of the statements they hear). Investigations of the cognitive processes underlying responses to interviews and opinion surveys, which have focused on people's attempts to respond in a way that will be informative to the questioner, also emphasize the second stage of processing. In contrast, studies of message reception in the third type of situation, which are exemplified by research on persuasion and impression formation, have largely (although not exclusively) been restricted to processes that occur at the first stage identified in Fig. 8.1.

SOCIAL COMPREHENSION PROCESSES

In this chapter, we distinguish between two types of meaning. The literal, or denotative meaning of a message is determined by the set of semantic concepts and referent-specific knowledge that a communicator uses to construct a message and that the recipient uses to interpret it. In contrast, the pragmatic meaning of a message is the meaning that the communicator intends the message to convey. Other dimensions of meaning can be viewed in terms of this more general dichotomy. For example, the connotative or evaluative meaning of a communication concerns its implications for an evaluation of the referent along a good–bad dimension. It is often unclear whether a communicator's message will be interpreted as evaluative or merely descriptive. For example, the statement "John is psychopathic" might be interpreted as an accurate description of John's personality or, alternatively, as a desire by the communicator to disparage him.

Meaning can also be symbolic and be conveyed in terms of metaphors. For example, "America is a gigantic fast-food restaurant" is not literally true; however, it might be intended to convey the opinion that Americans are obsessed with cheap but poor-quality merchandise through the symbolic meaning of "fast-food restaurants." Similarly, advertisements and television commercials may associate products with colors that symbolize purity, cleanliness, or patriotism. Although we do not focus in detail on the symbolic meaning of messages in this chapter, several of the processes we discuss have implications for its transmission.

As these examples indicate, the meaning of a message does not reside solely in the communication itself. Rather, meaning is attributed to the message by the perceiver. A conceptualization of how the information exchanged in social situations is comprehended requires prior understanding of the factors that influence both the literal meaning that is assigned to a message and the pragmatic meaning that is attached to it. The distinction between these two types of meaning is well known (Clark, 1996; Green, 1989; Grice, 1975; Higgins, 1981; Krauss & Chiu, 1998;
Sperber & Wilson, 1986). Only a few attempts have been made to examine its broader implications for social communication, however (but see Higgins, 1981; McCann & Higgins, 1992; Schwarz, 1994; Wyer & Gruenfeld, 1995). In the pages to follow, we review the processes involved in construing each type of meaning.

Determinants of Literal Meaning

A message is spontaneously interpreted in terms of concepts and knowledge that are easily accessible in memory and are applicable to the communication's referents (Wyer & Srull, 1989). These concepts and knowledge can be at different levels of abstractness. For example, the statement "Bill Clinton kissed Monica Lewinsky" might call to mind a specific instance of the behavior that one heard about on television. Alternatively, the behavior might be interpreted in terms of a more general event concept ("a man kissed a woman," "a president kissed his assistant") or an even more general trait concept ("romantic," "passionate," "lecherous," etc.). As these examples suggest, several alternative concepts can often be applied to the same message, the number of which is likely to increase with their level of abstractness. Moreover, the evaluative and descriptive implications of the concepts can differ considerably.

One's interpretation of information in terms of these concepts results in a representation that is stored in memory as part of one's knowledge about its referents. As we elaborate presently, the representation may later be retrieved and used as a basis for judgments, behavior, and communications to others. This may be done independently of the information from which the representation was originally constructed (Higgins, 1996; Wyer & Srull, 1989). Consequently, an understanding of the processes that enter into the initial interpretation that people place on information is of considerable importance. We first describe the factors that influence the modality and level of abstractness at which a message's literal meaning is encoded and stored in memory. We then consider the factors that determine which of several subsets of knowledge is likely to be used to interpret information when more than one subset is potentially applicable.

Effects of Information Modality and Format on the Mental Representation of Communications

Nonverbal Encoding of Verbal Information. Social information is transmitted in a number of modalities (e.g., linguistic, visual, and acoustic). Although the information is often encoded into memory in terms that reflect the modality in which it is conveyed (Carlston, 1994; Wyer & Srull, 1989), it can be represented in other modalities as well. A general theory of social comprehension proposed by Wyer and Radavansky (1999) assumes that persons who receive verbal information describing one or more thematically related events spontaneously construct a mental simulation of these events (i.e., a situation model) in the course of comprehending it (see also Johnson-Laird, 1983, 1989; Kintsch, 1998; Zwaan & Radavansky, 1998). This representation consists of a mental image as well as a meta-linguistic description. Several studies indirectly confirm this assumption. For example, people take less time to comprehend "Mary was reading a book on the couch. John came into the room" than to comprehend "Mary was reading a book on the couch. John went into the room" (Black, Turner, & Bower, 1979). This is presumably because in the first case, recipients can form a mental image of both events from the same visual perspective (that of someone in the room). In the second case, however, they must shift their visual perspective
(to that of someone outside the room) to comprehend John's action, and this shift takes time.

In another demonstration of the role of visual imagery in comprehending verbal information (Glenberg, Meyer, & Lindem, 1987), people read a story that began with either the phrase "John put on his sweatshirt and went jogging" or the phrase "John took off his sweatshirt and went jogging". In a later, recognition-memory task, they took less time to verify that "sweatshirt" had been mentioned in the first case than the second. In the first case, readers presumably formed a mental image of John wearing his sweatshirt that was retained in their representations of the subsequent events that were described, and so the feature was easier to find and verify. (For other evidence of spontaneous mental imagery, see Bransford & Johnson, 1972; Radvansky, Wyer, Curiel, & Lutz, 1997; Radvansky & Zacks, 1991.)

Visual descriptions of an object or event generally have more impact on judgments and behavior than their verbally coded counterparts. Gardner and Houston (1986), for example, found that the picture of a restaurant was remembered longer than the verbal descriptions that accompanied it and that its relative impact on evaluations of the restaurant increased correspondingly over time.

Moreover, verbal information is better retained in memory if it spontaneously elicits visual images than if it does not. In a study by Reyes, Thompson, and Bower (1980), participants read a summary of a court case involving a defendant who was accused of drunken driving. The defense testimony contained evidence that the defendant was able to jump out of the way of an automobile. In some conditions, the car was nondescript. In other conditions, however, it was described as a shiny red Volkswagen. Analogously, the prosecution testimony included a statement that the defendant had bumped into a table and spilled something on the floor or, alternatively, spilled guacamole dip on a white shag rug. These different descriptions had little impact on the verdicts that participants reported immediately after reading the evidence. After a day's delay, however, participants' verdicts typically favored the side whose evidence had elicited strong visual images.

Reyes et al.'s (1980) findings suggest that information is easier to comprehend if it elicits visual images of the events it describes and, therefore, is more likely to be retained in memory. A quite different series of studies by Bransford and his colleagues (Bransford, Barclay, & Franks, 1972; Bransford & Johnson, 1972) have similar implications. For example, Bransford et al. (1972) found that apparently anomalous sentences (e.g., "The haystack was important because the cloth would rip"); or "The notes were sour because the seam was split") were recalled poorly when presented in isolation; however, preceding the sentences by a single word ("parachute" and "bagpipes," respectively) led them to be remembered very well. These words activated bodies of knowledge that stimulated participants to imagine a situation in which the statements were meaningful. (Thus, presenting the word parachute before "The haystack was important because the cloth would rip" led recipients to imagine a parachutist landing in a haystack to avoid getting the chute caught in a tree.) In other studies (Bransford & Johnson, 1972; Bransford & Stein, 1984), paragraphs describing ostensibly anomalous sequences of events were made meaningful by assigning the passages a title that identified the situational context in which the events occurred, thereby activating a body of knowledge that permitted the relations among the events to be understood.

Verbal Encoding of Visual Information: Interference Effects. The preceding studies suggest that verbal messages often elicit mental images spontaneously in the
course of comprehending them. The reverse is not always true. That is, information that is conveyed visually may not be assigned linguistic codes unless there is some extrinsic reason to do so (Wyer & Radavansky, 1999). Moreover, once these codes are assigned, they may actually interfere with the later ability to remember the information. Schoolder and Engstler-Schoolder (1990) found that persons were less able to identify the faces of individuals they had seen if they had previously been asked to describe the faces verbally than if they had not. Chiu, Krauss, and Lee (1999) obtained results with similar implications. These studies suggest that linguistically coded representations of visual information can interfere with memory for the information that gave rise to their construction.

Newly formed representations of an event can sometimes be coded visually rather than verbally, and these representations can produce interference as well. In a classic study by Loftus and Palmer (1974), participants were shown a picture of an automobile accident. Later, some participants were asked to estimate how fast the car was going when it “smashed into” the tree, whereas others were asked how fast it was going when it “hit the tree.” Participants in the first condition not only estimated the car to have been traveling faster but also, in a later memory task, were more inclined to report having seen broken glass at the scene of the accident. These participants apparently constructed a new mental image of the accident and, in doing so, added features to the image that were consistent with the implications of the question. Consequently, they “remembered” these features later.

The research described in this section has generally concerned communications that were conveyed out of their social context. However, the interplay of visually and verbally coded features of a message is particularly important in social interactions in which people convey information not only through what they say but also by their tone of voice, facial expressions, and other nonverbal behaviors. In these interactions, communicators’ nonverbal behavior not only can convey information in its own right but also can influence how the verbal information accompanying it is interpreted (for reviews of this research, see Krauss & Chiu, 1998; DePaulo & Friedman, 1998). (We reconsider these effects later in this chapter.)

The Impact of Information Format on Comprehension and Judgment. The mental representations of information that are formed in the course of comprehending it can be influenced not only by the modality of the information but the format in which it is presented. Most of the knowledge we acquire through daily life experience is conveyed in the form of a temporally ordered sequence of events. In fact, Schank and Abelson (1995) claimed that virtually all social knowledge is in the form of stories or narratives that people construct of the experiences they observe or learn about. Although this claim may be overly zealous (Brewer, 1995; Rubin, 1995), the role of narrative representations of knowledge in comprehension and judgment has been recognized in such diverse areas as parent–child relations (Miller, 1994), close relationships (Miller & Read, 1991; Murray & Holmes, 1996), jury decision making (Pennington & Hastie, 1986, 1992), and community psychology (Mankowski & Rappaport, 1995).

Schank and Abelson’s (1995) observations suggest that information is more easily comprehended, and is more likely to elicit mental images, if it is conveyed in the form of a narrative (i.e., a temporally or thematically related sequence of events) than if it is conveyed in other ways. In fact, people who read descriptions of social events mentally reorganize them in a way that conveys their temporal relatedness regardless of the order in which they are presented (Wyer & Bodenhausen, 1985; see also Read,
Druian, & Miller, 1989). This could result in part from the fact that information is more easily understood when it is presented in the same form that it is usually acquired through direct experience.

Pennington and Hastie (1986, 1992) convincingly demonstrated the facilitative influence of narrative forms of information on comprehension and judgment. In one study, participants read the transcript of a court case. In some conditions, the testimony was organized according to the witness who conveyed it, independently of when the events described in the testimony took place. In other conditions, the testimony was presented in the order it became relevant in the temporal sequence of events that occurred (i.e., those leading up to the crime, the act itself, and its aftermath). When the prosecution and defense testimonies were presented in different orders, more than 80% of the participants favored the side whose testimony was presented in narrative order. When the evidence for both sides was presented in the same way, participants were equally divided in terms of which side they favored. They were more confident of their judgment when the testimony was conveyed in narrative order than when it was not, however. These findings clearly indicate that the information was more easily comprehended and, therefore, was more influential, when it was presented in a way that conveyed its temporal relatedness.

A study with similar implications identified the role of visual imagery in the comprehension of narrative information (Adaval & Wyer, 1998). Participants in this study read two travel brochures, one pertaining to India and the other to Thailand. Each brochure described the places to be visited and the events that would occur at each place. One brochure, however, conveyed the information in an ostensibly unordered list, with no indication of when the events would occur. The other conveyed the information in the form of a narrative that indicated the sequence of activities that would occur over the course of the vacation. The information typically had more impact on liking for the vacation when it was conveyed in a narrative, confirming Pennington and Hastie's conclusions. Moreover, introducing negative features of the vacation into the generally positive descriptions had less impact when the information was conveyed in a narrative than when it was listed.

Perhaps more provocative was evidence that accompanying the verbal description of the vacation with pictures increased participants' liking for vacations that were described in narrative form but actually decreased their liking for vacations for which features were simply listed. Moreover, telling participants to imagine the events that occurred (thus stimulating them to construct their own mental pictures) had similar effects. These results suggest that when information is conveyed in a way that makes it easy to construct a mental representation of a sequence of events, mental images of the events facilitate comprehension of the sequence as a whole. When information is conveyed in an unordered list, however, participants consider each piece of information separately and use a more mechanistic computational procedure to evaluate its implications (e.g., Anderson, 1971; Fishbein & Ajzen, 1975). In this case, visual images of the features can interfere with this computation and, therefore, can decrease the impact of the information.

To summarize, the effects of information format and modality on a message's impact are mediated by the influence of these variables on the ease of comprehending and using the information to attain one's processing objectives at the time. The influence of other features of a message could also be mediated by their impact on comprehension difficulty. For example, messages that refer to the recipient as "you" may stimulate the recipient to retrieve and use integrated bodies of self-knowledge to understand the message and elaborate its content. As a result, it may increase the
impact of these messages relative to those that refer to a third person (Brunkrant & Unnava, 1995; but see Meyers-Levy & Peracchio, 1995, for contingencies in this effect). The effects of other communication characteristics might be conceptualized analogously.

Influences of Knowledge Accessibility on Message Comprehension

In many instances, several alternative concepts can potentially be brought to bear on the interpretation of information. In such instances, people are unlikely to conduct an exhaustive review and evaluation of the implications of each alternative. Rather, they tend to apply the concept that is most easily accessible in memory (Higgins, 1996; Taylor & Fiske, 1978; Wyer & Srull, 1989). The accessibility of knowledge can be influenced by a number of factors. When people have a particular goal in mind when they receive information, they might intentionally retrieve concepts that are relevant to the attainment of this objective and use them to interpret the information to which the concepts apply. Thus, people may use different concepts to interpret information about someone’s behavior if they are considering the person for a job than if they are looking for a dinner companion. Once they have applied these concepts, they may later retrieve and use them as a basis for judging the person without considering other possible implications of the information they received initially. Higgins and Rholes (1978), for example, asked participants to read about a man’s behaviors for the purpose of describing the person to someone who either liked or disliked him. To attain this goal, they used concepts to interpret the man’s behaviors that were evaluatively consistent with the intended recipient’s attitude. Once participants applied these concepts, they used them as a basis for their own evaluations of the man they had described.

The concepts that people apply to information are not influenced by their communication objectives alone, however. Recent experiences that have nothing to do with the person or object to which a message pertains can also influence the concepts they use to interpret it. In a study by Higgins, Rholes, and Jones (1977), participants were unobtrusively exposed to either favorable trait concepts (adventurous, self-confident, persistent, etc.) or unfavorable ones (reckless, conceited, stubborn, etc.) while they performed a perceptual task. Then, as part of a different experiment, the participants read a paragraph describing the behaviors of a target person (Donald) to which both sets of concepts could be applied (e.g., wanting to cross the Atlantic in a sailboat, being well aware of his ability to do things well, rarely changing his mind after making a decision, etc.). Participants interpreted Donald’s behavior in terms of the set of concepts to which they had been exposed, and their evaluations of the target were based on these interpretations. Srull and Wyer (1979, 1980) reported results with similar implications.

In addition, concepts can become “chronically” accessible as a result of as a result of life experiences that have cause them to be frequently used (Higgins, King, & Mavin, 1982). Bargh, Bond, Lombardi, and Tota (1986), for example, found that differences in the chronic accessibility of trait concepts influenced their use of these concepts to interpret a target person’s behaviors independently of the effects of transitory, situation-specific influences on the accessibility of these concepts. More direct evidence of the effects of life experiences on the chronic accessibility of concepts was established in a study by Anderson, Reynolds, Schallert, and Goetz (1976). Participants in this study, who were either music education or physical education majors, read the following story:
Every Saturday night, four good friends get together. When Jerry, Mike and Pat arrived, Karen was sitting in her living room writing some notes. She quickly gathered the cards and stood up to greet her friends. They followed her into the living room but as usual, they couldn’t agree on exactly what to play. Jerry eventually took a stand and set things up. Finally, they began to play. Karen’s recorder filled the room with soft and pleasant music. Early in the evening, Mike noticed Pat’s hand and the many diamonds. As the night progressed, the tempo of play increased. Finally, a lull in the activities occurred. Taking advantage of this, Jerry pondered the arrangement in front of him. Mike interrupted Jerry’s reverie and said, “Let’s hear the score.” They listened carefully and commented on their performance. When the comments were all heard, exhausted but happy, Karen’s friends all went home.

After reading the story, participants were asked questions concerning what the story was about (e.g., “What did the persons comment on?”). Music majors were likely to interpret the story as pertaining to the rehearsal of a woodwind ensemble, whereas physical education majors were more likely to interpret it as a description of people playing cards. Analogously, a story that could potentially describe either a wrestling match or a jail break was more often given the first interpretation by physical education majors than by music majors.

**Persisting Effects of Abstract Encoding.** The importance of understanding situational and individual-difference variables that affect the interpretation of information is magnified by the fact that once this initial interpretation is made, its effect may not only persist over time but may actually increase. In a study by Carlston (1980), participants read a passage describing behaviors of a target person that could be interpreted as both kind and dishonest (e.g., covering up for a friend who cut class to go swimming) and judged the target with respect to one of these traits. Then, either a few minutes or several days later, they judged the target with respect to the second trait. Participants tended to base their second judgment on the evaluative implications of their first judgment rather than the descriptive implications of the behaviors they had read. (Thus, they judged the target to be honest if their first judgment had pertained to kindness and to be unkind if their first judgment had pertained to honesty.) Moreover, this tendency increased over time.

In a study by Srull and Wyer (1980), participants were asked to form an impression of a target person whose behaviors were ambiguous with respect to the hostility they conveyed. They judged the target as more hostile if this trait concept had been unobtrusively primed in the course of performing an earlier unrelated task than if it had not. As in Carlston’s study, however, priming had greater effects on judgments reported 24 hours after receiving the target information than on judgments reported immediately. These results also suggest that once information is encoded in terms of more abstract concepts at the time it is received, these concepts are retained in memory for a longer time than the information itself and, therefore, are increasingly likely to be used as a basis for judgments as time goes on. Consequently, fortuitous factors that bias the interpretation of information at the time it is first received can have enduring effects on judgments of the persons or objects that are described by the information.

**Effects of Awareness.** The effects of situational and individual difference factors on recipients’ interpretation of information can occur without awareness. Indeed, the concepts that persons use to interpret information can be primed subliminally
(Bargh & Pietromonaco, 1982; Devine, 1989; for a review, see Bargh, 1997). In fact, when people are aware that their interpretation of a message might be influenced by factors that are irrelevant to the message's content, they often may try to correct for this influence. Because they do not know the magnitude of the influence, however, their attempts are not always successful. In some cases, in fact, they may overadjust.

In a series of studies by Martin, Seta, and Crelia (1990), for example, participants who had been required to use either favorable or unfavorable trait concepts during an initial (priming) task were asked to form an impression of a target person whose behaviors could be interpreted in terms of both sets of concepts. Participants who were both able and motivated to avoid being biased by the priming task used the primed concepts less often to interpret the target's behaviors than they would have in the absence of priming. Similar “boomerang” effects of priming have been detected in other research paradigms when participants were aware that extraneous factors might bias their interpretation of information (Lombardi, Higgins, & Bargh, 1987; Ottati & Isbell, 1996; Wyer & Budesheim, 1987).

The adjustments that people make to correct for the biasing influence of an irrelevant experience can be partly a function of implicit theories they have acquired about the magnitude and direction of this influence (Petty & Wegener, 1993). For example, people are likely to perceive themselves to be less biased by extraneous concepts and knowledge with implications that are consistent with their expectations. Thus, suppose people believe that individuals usually behave in desirable ways; they should perceive themselves to be less biased by extraneous situational factors that lead them to interpret a person’s behavior favorably than by factors that induce them to interpret the behavior unfavorably. As a result, the first set of factors may have relatively greater influence on their interpretation of information and the judgments they make on the basis of it (Wyer & Budesheim, 1987).

Comprehension Processes Underlying Humor Elicitation

The comprehension processes discussed thus far are generally applicable independently of the content of the message being transmitted; however, the special circumstances surrounding one important situation deserve attention. That is, many messages that are received in a social context are amusing. Indeed, humorous jokes and stories are one of the most common forms of interpersonal communication. They are told to relieve boredom, to decrease tension in a heated debate, to warm up an audience, or to exemplify a more serious point the speaker wishes to make. Despite the pervasiveness of humorous communications, however, the factors that underlie their effectiveness are not well understood. Particularly unclear is how or why a joke or story elicits amusement.

Several theories have been proposed to account for the effects of humor-eliciting jokes and stories. Some conceptualizations are rooted in psychoanalytic theory (Freud, 1928, 1905/1960). Others assume that humor elicitation is motivated by hostility or by a desire to enhance oneself by disparaging others (Bergson, 1911; LaFave, Haddad, & Maesen, 1976; Zillman & Cantor, 1976). Still others focus on the impact of arousal and arousal reduction (Berlyne, 1969, 1971) and the resolution of cognitive incongruities (Koestler, 1964; Suls, 1972, 1983). Many of these theories are typically restricted to certain types of jokes and stories, however, and cannot account for the wide variety of humor-eliciting communications that occur (for a typology of different types of humor, see Long & Graesser, 1988).

A more comprehensive theory of humor elicitation that potentially accounts for the humor elicited both intentionally and unintentionally by communications was
proposed by Apter (1982) and extended by Wyer and Collins (1992). These theories assume that two conditions are necessary for humor to be elicited by a communication. First, a new piece of information is received that cannot be interpreted in terms of concepts and knowledge that were activated and applied to earlier pieces that were conveyed in the same context. Thus, some features of the information must be reinterpreted to comprehend the message as a whole. Second, the reinterpretation must in some way diminish the importance of either a referent of the communication (e.g., a person, object, event, or general state of affairs) or, in some cases, the communication itself.

As an example, consider the following:

A blind man enters a store with his dog. Suddenly, he picks it up by the tail and begins twirling it over his head. A salesman immediately rushes over and asks if he can be of help. "No thanks," says the blind man. "I'm just looking around."

Comprehension of this story requires a shift in the meaning of "just looking around." Moreover, the altered interpretation trivializes the man's rather bizarre behavior by likening it to other, more common situations in which people enter a store to "look around." Moreover, the reinterpretation also diminishes the seriousness of the man's disability. As a result, humor is elicited. Apter (1982; see also Wyer & Collins, 1992) analyzed a number of humor-eliciting communications in terms of this general conceptualization. He pointed out that in some instances, the shift in meaning does not diminish the protagonists in a story, but trivializes the story itself. A shaggy dog story, for example, purports to convey an important situation but is later revealed to be totally mundane. Similarly, a pun purports to convey something meaningful but is reinterpreted as merely a play on words.

Not all reinterpretations of information are diminishing, of course. Scientific discoveries can result from a reinterpretation of preexisting knowledge in terms of different concepts. These reconstructions are likely to elicit delight but not amusemet. Moreover, a distinction should be made between diminishment and disparagement. For one thing, a disparaging message is only diminishing when one's initial interpretation of the message enhances its referent. Thus, information that an ostensibly sophisticated waiter tripped and fell into a hotel swimming pool is much more likely to elicit amusement than information that a paraplegic did so. Similarly, information that a person failed his written driver's license examination three times is more likely to elicit amusement if the individual is a Nobel Prize-winning physicist than if he is mentally disadvantaged.

By the same token, not all diminishing reinterpretations are disparaging. As Shurcliff (1968) found, persons who were asked to extract blood from a white rat were more amused upon finding that the rat was made out of rubber than were persons who were simply asked to hold the animal. This is presumably because the ostensible importance of the situation was greater in the first case, and so the realization that the rat was made of rubber was correspondingly more diminishing.

The amount of humor a story elicits may be governed by two additional factors (Wyer & Collins, 1992). First, the humor elicited by the reinterpretation of a message is related nonmonotonically to the difficulty of making this reinterpretation. Put more simply, stories elicit less humor if they are either very easy or very difficult to understand than if they are moderately difficult (Wyer & Collins, 1992, Zigler, Levine, & Gould, 1967).

Second, the humor elicited by a story may increase with the amount of cognitive elaboration that can be performed on its humor-eliciting aspects. This may be partly
a function of the content of the story itself. For example, jokes are likely to elicit more amusement if they evoke mental images of the humor-eliciting state of affairs and its implications for the parties involved. Thus, the blind-man joke described earlier is likely to elicit more amusement than a joke that does not stimulate a visual image of the humor-eliciting event and its aftermath.

On the other hand, humor elicitation also depends on the type of elaboration that is performed. Many jokes have negative implications for members of a social or ethnic group or may be potentially offensive to the listener for other reasons. To the extent that recipients elaborate on these negative implications rather than the humor-eliciting aspects of a story, amusement is likely to decrease. Wyer and Collins (1992) distinguish between the cognitive processes that spontaneously elicit amusement in the course of comprehending a message and the more deliberative cognitive elaboration that occurs subsequently. Differences in perceptions that a joke is offensive may only influence the amount of amusement it elicits when recipients have the opportunity to engage in cognitive elaboration of the joke’s implications. When recipients are prevented from engaging in this post-comprehension activity, they may be equally amused in both cases. Thus, for example, a sexist joke might spontaneously elicit equal amusement in men and women when it is told at a party under conditions in which they do not have time to think about it carefully. Gender differences may only emerge after recipients have had time to elaborate its sexist implications.

**Summary and Implications for Message Reception Skills**

Several general principles emerge from the preceding discussion.

1. In the course of comprehending a message that occurs in a social context, recipients may spontaneously form a mental representation of the people and events it describes. This representation can contain both verbal (linguistic) features and non-verbal ones (i.e., a mental image). If recipients have a specific goal in mind, they may form an additional representation in terms of concepts that are relevant to this goal.

2. Once a mental representation has been formed, it can influence later responses to its referents independently of the information on which the representation was based. For example, memory for the original information may be distorted, and judgments may be biased toward the implications of the concepts that were used to interpret the information. Moreover, the magnitude of this bias may increase over time.

3. The concepts that people use to interpret a message can be influenced by the purpose for which they expect to use the information (Higgins & Rholes, 1978); however, situational and individual-difference variables that are objectively irrelevant to the content of a message can also influence the concepts and knowledge that recipients bring to bear on its interpretation. Consequently, these variables can also affect the way the message is interpreted. The influence of these variables can occur without awareness. Calling recipients’ attention to extraneous factors that could bias their interpretation of the information may lead them to adjust their responses to correct for this bias. They often adjust too much, however, with the result that the factors have a negative, “boomerang” effect on their responses to the information.

These conclusions call attention to differences in the knowledge that individuals have available for use in comprehending information and their skill in applying this knowledge. At the same time, they raise questions concerning the extent to which
these differences exert an influence. An adequate comprehension of a message is determined by the amount of knowledge one is able to bring to bear on its interpretation, but it also depends on the accessibility of this knowledge. People are unlikely to perform an extensive search of memory for concepts that might potentially be used to interpretation and may apply only the concepts that come to mind most quickly and easily (Higgins, 1996). Consequently, even though individuals have the knowledge required to understand the alternative ways in which a message might be interpreted, they do not always consider these alternatives unless there is some extrinsic reason to do so. Moreover, when recipients do attempt to adjust for biases in the interpretation they give to a message, they generally do not know how much to correct and may overcompensate. Therefore, although expertise in the area to which a message is relevant might increase recipients' sensitivity to the possibility of bias, this is not a guarantee that bias will not occur.

Determinants of Pragmatic Meaning

In many instances, a recipient may simply assume that a communicator's statement is intended to be taken literally without much deliberation. In other cases, however, a recipient may be stimulated to consider more carefully the communicator's motives for conveying the message and, in doing so, may infer that the message's literal meaning was not the meaning the communicator actually wished to transmit.

In informal conversations, clues that a statement should not be taken literally are often provided by the speaker's tone of voice or facial expression. An equally important indicator is the extent to which its semantic implications violate normative expectations for the sort of messages that are transmitted in the situation at hand. Grice (1975) identified a number of normative principles that govern both the transmission of messages in social situations and the interpretation that is placed on them. (For more recent refinements and extensions of these principles, see Green, 1989; Higgins, 1981; McCann & Higgins, 1992; Schwarz, 1994; Sperber & Wilson, 1986.) Five of these principles are particularly relevant to the communication processes of concern in this chapter:

1. **Informativeness**: Messages should convey information that the recipient does not already have.
2. **Relevance**: Messages should be relevant to the topic under discussion.
3. **Truthfulness**: Messages should convey the truth as the communicator sees it.
4. **Politeness**: Messages should avoid unnecessarily offending the intended recipient.
5. **Modesty**: Messages should avoid promoting the virtues of the speaker or to be otherwise self-aggrandizing.

There are obviously constraints on the conditions in which recipients expect a communicator to apply these principles. People may not expect a used-car dealer to be truthful, for example, or a politician to be modest. Moreover, some principles are specific to the type of situation in which communications are exchanged. The principles that govern get-acquainted conversations between strangers may not apply to discussions between close friends, job interviews, or business meetings. Nevertheless, the five principles described above are applicable in a wide range of situations. Communication principles guide not only the messages that persons generate but also the way these messages are interpreted. That is, in the absence of information
to the contrary, recipients assume that the communicator has, in fact, applied the principles in constructing his or her message. Therefore, when a message’s literal meaning appears to violate a principle, recipients may try to understand why the violation occurred. In doing so, they may be stimulated to reinterpret its meaning or the circumstances surrounding its transmission. Thus, for example, if a person’s statement appears to go without saying, recipients may speculate that the person might in fact have some reason to believe it to be informative. Alternatively, they may conclude that the communicator did not intend the statement to be taken literally. Similarly, a person who receives a communication that is obviously false may infer that the communicator is being sarcastic.

**An Illustrative Example**

Although Grice’s (1975) principles were initially applied to informal conversations, they are potentially applicable to any situation in which people receive a communication from a specified source. The information conveyed in the public media, for example, may be assumed by recipients to be both informative and truthful. Respondents in opinion surveys may assume that the questioner expects them to provide information that is truthful, informative, and relevant. Later sections of this chapter discuss implications of these possibilities in some detail. A study by Gruenfeld and Wyer (1992) also may be useful to illustrate the effects of communication principles in social comprehension.

Briefly, participants read a series of statements about familiar people and events that were ostensibly taken from either an encyclopedia or a newspaper. Several of the statements either asserted or denied the validity of propositions that participants at the time of the study typically assumed to be false (“The CIA is engaged in illegal drug trafficking,” “Lyndon Johnson was responsible for the assassination of John F. Kennedy,” “Some members of the U.S. Congress belong to the American Nazi Party,” etc.). Thus, affirmations of the propositions were newsworthy, whereas denials would normally go without saying and, therefore, appeared uninformative. Participants after reading each statement reported their beliefs that the proposition to which it pertained was true. These beliefs were compared with those reported by participants in a control condition who were not exposed to either denials or affirmations of the propositions’ validity.

When participants were told that the statements had come from an encyclopedia, affirmations increased their beliefs in the proposition’s validity and denials decreased these beliefs. In contrast, statements that had ostensibly been taken from newspapers increased participants’ beliefs that the propositions were true regardless of whether the statements affirmed or denied their validity. In fact, denials of a proposition’s validity increased participants’ beliefs in it just as much as assertions that the proposition was true.

Thus, participants apparently recognized that the denial of a proposition they already believed to be false violated the informativeness principle. In attempting to reconcile this apparent violation, participants speculated that there must be some reason to believe that the proposition was in fact true (thus making its denial newsworthy). As a result of this speculation, however, they increased their beliefs in the proposition’s validity relative to conditions in which the denial had not been encountered. Note that this processing only occurred when statements ostensibly came from a newspaper, whose presumed objective was to convey new information. The objective of an encyclopedia is presumably to record archival knowledge regardless
of how well known it is. Thus, participants did not consider the informativeness principle to be applicable to statements from this source, and so they did not revise their interpretation of its meaning.

Not all uninformative statements can be reinterpreted in the way suggested by the aforementioned study. For example, the statement "United States citizens can vote at the age of 18" cannot possibly be false. Individuals who encounter such a statement, therefore, do not speculate that it might not be true. Instead, they may infer that the communicator's objective is to express an implicit attitude (e.g., "United States citizens can vote at the age of 18, and this is a terrible policy," or "U.S. citizens can vote at the age of 18, but citizens of many other countries cannot"). To this extent, an assertion that the statement is true may not alter recipients' beliefs in its validity, but rather may influence the favorableness of their attitudes toward the state of affairs it describes. Gruenfeld and Wyer (1992) found evidence of this as well.

As Wegner, Wenzlaff, Kerker, and Beattie (1981) noted in their discussion of innuendoes, communicators sometimes intentionally capitalize on recipients' application of communication principles to stimulate them to make inferences that were not literally implied. For example, a politician's comment that "I have no direct evidence that my opponent is a heavy cocaine user" might be made to plant the idea that it could, in fact, be true. Analogous effects could occur in advertising. For example, the claim "Soft and Sudsy does not contain ecoplastereol," which consumers never believed in the first place, may lead them to question why the assertion is made and, in doing so, to infer both that ecoplastereol is an undesirable attribute and that competitive brands have it. (For indications that persons often respond to the pragmatic implications of advertising claims in much the same way they respond to direct assertions, see Stareman and Carter (1988). These possibilities have somewhat ironic implications for the role of communication skills in message transmission and reception. That is, communicators' skills lie in their ability to lead recipients to identify the pragmatic meaning of their statements. (For theoretical analyses of the role of conversational norms in the transmission of intentionally deceptive messages, see Jacobs, Dawson, & Brushers, 1996, and McCormack, 1992.) On the other hand, recipients' skills reside in their ability to avoid spontaneously extracting this meaning.

Recognition of Norm Violations

People obviously do not assess the pragmatic implications of every message they receive. If a message's literal meaning falls within a range of acceptability along the dimension to which the principle pertains (informativeness, truthfulness, etc.), its literal meaning is likely to be accepted as its intended meaning without considering alternative interpretations. In this regard, Wyer and Radvansky (1999) found that the validity of statements about known persons or objects is often assessed automatically in the course of comprehending the statements. In a quite different paradigm, Bargh (1997; Bargh, Chaiken, Govender, & Pratto, 1992) found evidence that all stimuli are spontaneously evaluated as either favorable or unfavorable at the time one is exposed to them. People may not be consciously aware of these verification and evaluation processes unless the results of these processes exceed some "expectancy" threshold. That is, persons may not recognize that a statement violates the informativeness principle unless the spontaneous validity assessment that occurs in the course of comprehending it exceeds some maximum threshold value of plausibility. Correspondingly, they may not recognize that a statement violates the truthfulness principle unless its validity is below some minimal value. Similarly, statements may
not be regarded as violating a politeness or modesty principle unless the desirability of their implications are outside certain boundaries of undesirability or desirability as a result of processes postulated by Bargh (1997).

Although these possibilities are speculative, they are consistent with a two-stage process of comprehension in which recipients of a message first assess its literal meaning and only consider its pragmatic meaning if its literal meaning violates their expectations for its validity or favorableness. This two-stage conceptualization helps to localize the point at which different types of message reception skills are likely to operate. At the initial stage, these skills depend on the knowledge and concepts that recipients have accessible in memory at the time they receive information, their awareness of the possible communication-irrelevant factors that could influence the accessibility of these concepts and knowledge, and their perceptions of how much they should adjust to compensate for this influence. At the second, pragmatic stage of processing, these skills depend on the recipient's ability to identify factors that convey the communicator's knowledge of both the topic and the recipient as well as the purpose for which the message is transmitted. The effects of these skills become apparent in the remaining sections of this chapter.

Caution should nevertheless be taken in overgeneralizing these effects. For one thing, messages are often received for a purpose that requires an assessment of their accuracy. The need to attain this objective may motivate recipients to attend to pragmatic aspects of the message that they would otherwise ignore. By the same token, recipients might spontaneously recognize that a statement violates a conversational norm but might not be sufficiently motivated to engage in the cognitive effort required to construe its nonliteral implications. Hewes (1995) reviewed a number of situational and individual-difference variables that can influence the extent to which recipients of a message are likely to be sensitive to its inaccuracy and to be motivated to identify its true implications. These factors can exert an influence over and above the processes considered here.

COMMUNICATION AND COMPREHENSION
IN FACE-TO-FACE CONVERSATIONS

The messages exchanged in everyday conversation consist of a complex of verbal and nonverbal features. Moreover, the generation and interpretation of these messages can both be influenced by the objectives of the parties involved. They can also be influenced by participants' perceptions of one another's goals and knowledge of the topic under discussion. In light of these complexities, the fact that people typically communicate quite well in these situations (or, at least, believe they are doing so) might seem rather remarkable.

As noted earlier, many communications are inherently ambiguous, and communication effectiveness can sometimes be facilitated by this ambiguity. Thus, a woman's statement to a colleague that his research is "provocative" could reflect her perception that the colleague's findings are artifactual and his conclusions are completely implausible, but the colleague might interpret her remark as an indication that his research has far-reaching implications. Similarly, a communicator who believes a woman's hairstyle would be more appropriate for a 3-year-old might refer to it as "cute," but the recipient might interpret the statement as evidence that her hair is becoming. In such instances, the speaker might intentionally choose an ambiguous descriptor to be polite while at the same time maintaining a self-perception of being truthful. In short, the imprecision of language often permits conversation participants
to perceive that they are communicating effectively and harmoniously even when they are not.

Two sets of factors noted earlier influence the effectiveness of comments made in conversations. First, recipients often use communicators' nonverbal behaviors as clues to the meaning they wish to convey in the things they say. Second, as noted earlier, the statements made in conversations are guided by a number of implicit rules or principles that influence recipients' expectations for the form and content of communicators' statements. Neither set of factors is totally reliable. Moreover, the way in which the factors come into play depends on the type of conversation being conducted, its situational context, and idiosyncratic characteristics of the parties involved. These contingencies are examined in the pages that follow.

Nonverbal Indicators of Meaning

A critical component of the communications conveyed in face-to-face interactions is nonverbal. A speaker's facial expression, tone of voice, eye contact with the recipient and bodily movements can all influence how the speaker's statements are interpreted. These nonverbal behaviors can occur without the communicator's awareness.

The nonverbal components of the messages transmitted in a social interaction are often as important to comprehension as the statements that accompany them. In fact, the two components are highly interactive. Nevertheless, they have typically been investigated independently. Theory and research on nonverbal communication are discussed in detail elsewhere (e.g., DePaulo & Friedman, 1998; see also Krauss & Chiu, 1998, and Burgoon & Bacue, this volume). Although this work is of interest in its own right, its importance in the present context derives from its implications for the pragmatic meaning that participants in a social interaction are likely to extract from one another's communications and the impact of this meaning on their subsequent judgments and behavior. This importance is increased by virtue of the fact that neither communicators nor recipients are fully aware of the specific behaviors that transmit meaning. Thus, communicators may unwittingly convey attitudes and emotions through their nonverbal behavior that they do not wish to reveal. By the same token, recipients may infer a communicator's intentions from a configuration of nonverbal behaviors without being fully aware of the specific bases for this inference. In informal conversations, a communicator's nonverbal behaviors are particularly likely to influence perceptions of intimacy, interpersonal attraction, and emotion. They can also influence perceptions that a communicator is lying or telling the truth. We consider these matters in turn. An overriding consideration in our discussion surrounds the extent to which the information conveyed by these behaviors is transmitted intentionally or unwittingly.

Interpersonal Attraction and Intimacy

Individuals' attraction to one another is obviously conveyed through their facial expressions and tone of voice as well as other nonverbal behaviors (Cappella, 1981; Palmer & Simmons, 1955). Two factors, eye contact and physical proximity, are particularly important (Argyle & Cook, 1976; Argyle & Dean, 1965; Patterson, 1976). The effects of these latter factors are often compensatory; however, Argyle and Dean (1965; see also Cappella, 1981) note that for each participant in an interaction, an optimal level of intimacy exists at which the participants feel comfortable and that this level is communicated through both eye contact and physical closeness. Therefore,
to maintain his or her intimacy at a desired level, a participant may compensate for
an increase in physical proximity by decreasing eye contact, or conversely.

The association between nonverbal behaviors and intimacy could reflect learned
or unlearned approach or avoidance tendencies that are expressed as feelings of
attraction or repulsion. However, people often respond configurally to social situations
without articulating their specific features (Lazarus, 1982). Consequently, as Palmer
and Simmons (1995) showed, the particular nonverbal behaviors that elicit these
feelings may not be clearly identified. (For summaries of evidence that people are
generally uncertain of the source of their affective reactions, see Schwarz & Clore,
1988, 1996.) That is, when one person's nonverbal behavior conveys a level of inti-
mary that the other considers suboptimal, it may elicit vague feelings of discomfort,
and these feelings may stimulate the other to behave in a way that decreases or
eliminates this discomfort.

These possibilities have interesting implications for interactions between individu-
als whose preferred levels of intimacy differ. Certain of these implications, considered
in detail by Cappella and Greene (1982; see also Wyer & Carlston, 1979), can be con-
veyed through an example. Suppose persons A and B are interacting and that the
comfort each experiences at different levels of perceived intimacy is shown in Fig. 8.2.
The intimacy that A considers optimal, as conveyed through a combination of eye
contact and physical proximity, is greater than the level that B prefers. Therefore, if A
attempts to establish a degree of eye contact and proximity that corresponds to his or
her preferred intimacy level, B will feel uncomfortable and therefore may decrease
both eye contact and proximity. Thus, behavior should decrease B's discomfort but
will increase A's. Over a series of iterative adjustments, the parties are likely to adopt
a level of intimacy that corresponds to the intersection of the two comfort gradients
(point Z in Fig. 8.2). However, the comfort experienced by A and B at this level (Cz)
is not optimal for either party.
To take this example one step further, suppose conditions arise that increase the level of intimacy that A considers optimal without affecting B's preferred level, as shown by the dashed curve in Fig. 8.2. This change should theoretically lead to the establishment of a new level of overall intimacy (CZ) that is greater than it was initially. At the same time, the actual comfort experienced by both parties to the interaction (CX) should decrease. In other words, A's efforts to establish greater intimacy are counterproductive.

The preceding analysis is undoubtedly oversimplified. A discrepancy-arousal theory proposed by Cappella and Greene (1982) provides a more precise formulation of the interplay of interaction expectations, expressive behavior, and intimacy and has implications for the conditions in which reciprocal as well as compensatory behavior will occur. For example, the theory predicts that intimacy-related responses will be reciprocated when interacting parties have similar expectations for one another's feelings and behavior but will be compensatory when parties' expectations differ. The theory also takes into account differences in interaction participants' latitudes of acceptance for expressive behavior.

In addition, nonverbal behavior is usually accompanied by verbal behavior, and the two modes of communication can interact. This is particularly true in the case of eye contact (Cappella, 1981; DePaulo & Friedman, 1998). In an early study, Ellsworth and Carlsmith (1968) found that eye contact increased participants' liking for persons who expressed views that agreed with their own, but decreased their liking for persons who expressed opposing views. Eye contact can function in other ways, however. Hornik (1987), for example, found that people were more likely to comply with a request to be interviewed when the interviewer made eye contact with them.

The function of eye contact can vary over the course of an interaction (Kendon, 1967; Krauss, Fussell, & Chen, 1995). Its function also depends on the role of the participant. For example, a speaker often uses eye contact to punctuate or to emphasize points he or she wishes to make, or alternatively, as a signal that it is the listener's turn to speak (Kendon, 1967). Simultaneously, listeners often use "back-channel" responses (smiling, nodding, etc.) to convey understanding or agreement. These back-channel responses undoubtedly influence speakers' perceptions that the listener is interested in what they have to say and, as a result, their attraction to the listener.

**Communication of Emotion**

Eye contact can often be interpreted as an indication of the intensity of a communicator's feelings about the topic of discussion (Ellsworth & Carlsmith, 1968). For example, a communicator's compliments to a recipient may be interpreted as friendlier if the communicator maintains eye contact, whereas his or her criticisms may be interpreted as conveying more hostility in this condition. More generally, eye contact may have an important impact on perceptions of emotion. Other nonverbal and paralinguistic factors influence these perceptions as well, such as facial expressions and tone of voice. In this regard, Ekman (1972; see also Ekman, Friesen, & Ellsworth, 1972; Izard, 1971) concluded that one's facial expressions are natural responses to the emotions one is experiencing and that as a result, several distinct emotions are reliably conveyed through these expressions. More recent work, however, suggests that facial expressions may not be as reliable indicators of emotion as had originally been assumed, and their implications may not be perceived similarly in different cultures (Russell, 1994). In fact, emotions may only be accurately inferred from facial expressions when the expressions are posed rather than occurring naturally (Motley,
1993; Motley & Camden, 1988). In a normal conversation, the emotions conveyed by facial expressions are typically inferred from the verbal context in which they occur, and inferences of their meaning when presented out of context are not appreciably better than chance (Motley, 1993). Thus, although facial expressions are used extensively to infer one another’s feelings, this is not done independently of the verbal statements that accompany them.

Persons’ expressions may not only be consequences of their emotional states but also determinants of them. That is, proprioceptive feedback from one’s facial expressions can actually elicit emotions with which the expressions are associated (Laird, 1974; Strack, Martin, & Stepper, 1988; Zajonc, Murphy, & Inglehart, 1989). One interesting implication of this stems from evidence that people unconsciously imitate the facial expressions of the persons with whom they interact (Haffield, Cacioppo, & Rapson, 1994). (For example, speakers who smile may elicit smiling in the listeners.) If this is so, and if proprioceptive feedback from facial expressions elicits feelings, it raises the possibility that the emotions communicators experience and reflect in their facial expressions are transmitted to observers who unwittingly imitate these expressions.

Nonverbal Influences on the Detection of Deception: Controlled Versus Uncontrolled Processes

People who wish to express positive or negative feelings can sometimes try to convey these feelings intentionally through their nonverbal behavior. In other cases, however, people try to hide their feelings from the persons with whom they interact. Their success in either endeavor depends on (a) whether the nonverbal behaviors that provide cues to their feelings are under conscious control and (b) whether the nonverbal behaviors that persons believe convey feelings are actually used by others to infer these feelings.

In the first regard, DePaulo and Friedman (1998) summarized evidence that persons regulate their nonverbal behaviors in presenting themselves to different audiences. This may reflect a general strategy of impression management (Schlenker, 1980; Leary, 1995). At the same time, communicators are not aware of the entire configuration of cues that they actually transmit in a social situation, nor are they aware of the cues that recipients will use to infer their attitudes and emotions (Barr & Kleck, 1995; Buck, 1984; Ekman & Friesen, 1969). Consequently, communicators’ conscious attempts to control their nonverbal behaviors in ways that either express or suppress an emotion are often unsuccessful.

The empirical research that bears most directly on these possibilities has focused on the factors associated with deception and the ability to detect it. Based on a review of a number of correlates of deception, Zuckerman, DePaulo, and Rosenthal (1981) concluded that of all the factors that message recipients might use to detect deception (voice tone, body movements, etc.), facial cues are the least reliable. In many cases, these cues might even interfere with accurate detection (Ekman & Friesen, 1974). Nevertheless, facial expressions can sometimes be revealing. For one thing, deception is more easily detected when communicators are highly motivated to deceive than when they are not. DePaulo and Friedman (1998) concluded that “the most consistent results across ... different ways of manipulating motivation was that when communicators were highly motivated to get away with their lies, their lies were more likely to be betrayed by their nonverbal cues, including their facial expressions” (p. 18). Individual differences in the ability to exercise this control are
correlated with high expectations for success and with lack of concern about the inappropriateness of deceiving (DePaulo & Kirkendol, 1989). This suggests, somewhat ironically, that the people who are least concerned about their ability to deceive are the most successful in doing so.

Final Comment

The research and theory reviewed briefly in this section exemplify the influences that nonverbal behavior can have on the transmission and reception of pragmatic meaning in social interactions. On the other hand, it also conveys the difficulty of acquiring a full understanding of this influence. It seems likely that just as communicators are often unaware of the configuration of nonverbal behaviors that conveys a particular emotion, or desire to deceive, recipients are unaware of the configuration of nonverbal behaviors they use to infer it. Rather, they are likely to respond schematically to the communicators' behavior without identifying specific features (Lazarus, 1982). To this extent, research and theory that concerns the impact of isolated types of individual nonverbal behaviors on perceptions of emotions, feelings of intimacy, or intentions to deceive may be of limited value.

The Role of Normative Expectations in Message Comprehension

As we noted in our more general discussion of message reception processes, people's expectations for the communications they receive in a social interaction are sometimes the result of implicit rules that govern communications in general (cf. Grice, 1975). However, they can also result from factors that are idiosyncratic to the type of situation in which the interaction occurs and the persons involved in it. In this section, we consider the influence of individuals' norm-based expectations for the messages they receive in a conversation on (a) their attention to one another's statements, (b) their interpretation of these statements, and (c) their attraction to the communicator. We also consider the effects of speakers' expectations for how a recipient will react to their statements on the recipient's actual reactions.

Effects of Expectations on Attention to Message Content

People are more likely to think about the statements they hear in a conversation if the statements deviate from expectations. In fact, when people have acquired expectations for the type of statements that are often made in a given situation, they may respond to comments whose general structure is consistent with these expectations without carefully analyzing their actual content. Thus, if a person's greeting to a colleague, "Hi, how are things going?" elicits the comment "I just lost my job," the person might nevertheless respond with "Good, glad to hear it," without registering the negative implications of the colleague's utterance.

Studies reported by Langer and her colleagues exemplify this possibility. In one well-known study (Langer, Blank, & Chanowitz, 1978), Xerox machine users were approached by a confederate who asked if she could interrupt them to make either 5 or 20 copies. In one condition, the confederate gave no explanation at all for the request, simply stating, "Excuse me, I have to make 5 (20) copies. Can I use the Xerox machine?" In this condition, few persons complied with the request regardless of the number of copies requested. In a second condition, the confederate gave a legitimate reason for the request: "Can I use the Xerox machine because I'm in a rush?"
In this case, most persons complied regardless of the number of copies to be made. A third condition was the critical one. In this case, the confederate’s explanation was “placebic”; that is, it had the form of an explanation but in fact only repeated the original request: “Can I use the Xerox machine because I have to make copies?”

In this condition, users refused to grant the request to make 20 copies, just as they did in no-explanation conditions; however, they were as likely to comply with a request to make 5 copies as they were when a legitimate reason was given. Thus, users only paid attention to the content of the request when they were confronted with a major inconvenience. Otherwise, they responded to the form of the request, apparently based on a normative principle that one should comply with requests “if there is a reason to do so,” without thinking about the nature of the reason. (For other evidence suggesting that the effects of appeals for help are often independent of the amount of justification that is given for the appeals, see Jason, Rose, Ferrini, & Barone, 1984.)

A quite different study by Langer and Abelson (1972) has somewhat similar implications. Persons in a shopping center were approached by a woman who was apparently limping and in pain. In one, explanation-first condition, her statement was, “My leg is killing me. I think I sprained it. Would you do something for me? Would you call my husband and tell him to pick me up?” In a second, request-first condition, she said, “Would you do something for me? Would you call my husband and tell him to pick me up? My leg is killing me. I think I sprained it.” Two other conditions were similar except that the request was to call the woman’s boss and tell him she would be late. The woman’s request to call her husband was assumed to be legitimate, as it reflected a genuine need on the part of the victim. In contrast, the request to call her boss was not sufficiently important to justify inconveniencing a stranger. Giving the explanation first focused persons’ attention on the victim. This made the legitimacy of her request salient and led decisions to be based on this factor. That is, persons were more likely to comply with the woman’s request to call her husband than with her request to call her boss. Making the request at the outset appeared to focus persons’ attention on themselves, however, activating a concept of themselves as someone who gives help when asked. In this case, therefore, persons complied with the woman’s request regardless of its legitimacy.

These findings provide additional support for the conjecture that when the structure of a communication is consistent with normative expectations, its specific content and implications are often not thought about at all. When a communicator’s statements are inconsistent with expectations, however, recipients may be more inclined to think about why they were made. This could be true regardless of whether the recipients are active participants in the conversation or passive observers. Participants in a study by Wyer, Budesheim, Lambert, and Swan (1994) listened to a tape-recorded conversation between two male students, P and O. In the course of the conversation, P mentioned both favorable and unfavorable behaviors that O had performed at an earlier point in time, and O described several positive and negative things that he personally had done. Thus, P’s unfavorable descriptions of O violated a politeness principle, whereas O’s description of his own favorable behaviors violated a modesty principle. To the extent that norm-violating statements stimulated attempts to explain their occurrence, listeners should remember them better than statements that are consistent with expectations. This was true. Listeners had better recall of things P said about O if they were unfavorable than if they were favorable but had better recall of things O said about himself if they were favorable than if they were unfavorable.
Effects of Expectations on the Interpretation of Messages

A very large proportion of the comments that people make in everyday conversation are not taken literally. The most obvious examples are the questions and statements that constitute indirect speech acts (Searle, 1990). A person who asks, “Can you tell me what time it is?” is not really interested in the recipient’s ability to read a clock. Similarly, a person who interrupts an ongoing conversation by commenting that “It seems stuffy in here” is not trying to convey information but rather, is suggesting that someone open the window. The processes that underlie responses to the two statements might be somewhat different, however. The first request is essentially idiomatic and is automatically interpreted as equivalent in meaning to “What time is it?” (Gibbs, 1986). In contrast, comprehension of the second may require a conscious recognition that the statement’s literal meaning violates a norm to be informative and relevant to the topic under discussion. Therefore, a deliberative construal of the statement’s intended meaning is more likely.

In many instances, the use of an indirect speech act reflects a learned tendency to be polite. For example, the statements “Can you tell me what time it is?” and “It seems cold in here” seem more polite than the statements “What time is it?” and “Close the window.” Exceptions to this rule can occur when participants have substantial prior knowledge about one another that they bring to bear on the interpretation of a statement’s intended meaning (Watzlavick, Beavin, & Jackson, 1967). For example, if a hostess comments, “It’s cold in here,” at a dinner party, her guests are likely to interpret her statement as a polite request to her husband to turn up the thermostat. Her spouse, however, with whom she had had many heated arguments about his obsession with energy conservation, might interpret the comment as hostile.

An interesting indication of the role of speech acts is provided by Albert and Kessler (1978; see also Knapp, Hart, Friedrich, & Shulman, 1973) in a more general analysis of how conversations are terminated. When participants in a conversation are ready to end it, how is this done? To investigate this matter, Albert and Kessler (1978) asked either friends or strangers to call one another and engage in either an unstructured get-acquainted conversation or to discuss a particular topic. No indication was given of how long they should talk. The comments that were made in the course of ending the conversation were tabulated. Endings often included justifications (“e.g., “Well, I have to get back to work”), well-wishing statements (e.g., “Have a good time at the party,” “take care,” etc.), and informal summaries of what had been accomplished (“Well, I guess we agree that...”). Of particular interest in the present context was the frequency of continuity statements, that is, comments that ostensibly set plans to continue the interaction without necessarily intending to do so (e.g., “Let’s get together for lunch some time,” “See you later,” etc.). These statements were made equally often by friends and strangers.

The ability to recognize that a statement’s intended meaning is not its literal meaning is of importance in informal conversations. This importance is exemplified in (a) the identification of sarcasm and witticisms, (b) sensitivity to the distinction between hostility and teasing, and (c) the communication of affect.

Recognition of Sarcasm and Witticisms. The ability to distinguish between a statement’s literal meaning and its intended meaning obviously comes into play in the detection of sarcasm. People who hear the statement “Central Illinois is certainly a great place to spend the summer—all that corn and high humidity” are likely to recognize it as a disparagement of Illinois rather than praise of it. This is partly because
the statement's literal meaning violates the truthfulness principle, stimulating the recipients to realize that this is not the meaning intended.

Many sarcastic remarks elicit amusement. Although the cognitive processes that underlie humor elicitation were discussed earlier in this chapter, some additional considerations are worth noting briefly in the present context. According to the theories of humor elicitation proposed by Wyer and Collins (1992) and Apter (1982), a statement should be recognized as a witticism if the statement's intended meaning trivializes or diminishes its referent relative to the statement's literal meaning. Thus, the intended meaning of the aforementioned statement about Illinois summers diminishes Illinois relative to its literal meaning, and so the statement might be considered mildly amusing. People who are familiar with Switzerland and hear the statement "Switzerland is an awful place to spend the summer—all those ugly lakes and high mountains" should interpret it as ironic as well. Because the statement's intended meaning enhances Switzerland rather than diminishing it, however, the statement should theoretically elicit less humor than the statement about Illinois. Similarly, a person who is asked, "Who is the most intelligent public figure you can think of?" and answers "Dan Quayle" is likely to elicit more amusement than someone who is asked, "Who is the least intelligent public figure you can think of?" and responds, "Albert Einstein."

But how does one recognize that a statement is not intended to be taken literally? This recognition requires knowledge of not only the statement's referent but also the attitudes and opinions of the communicator. (See Sanders, this volume, for a more detailed analysis of this possibility.) To identify a statement extolling the desirability of a summer vacation in Illinois as a witticism, one must obviously be familiar with Illinois' climate and geography. One must also know that the speaker is not personally enamored of hot muggy weather and unending expanses of farmland, however. As a second example, a person who comments, "What this country needs is another Ronald Reagan" is more likely to elicit amusement in a liberal Democrat, who presumably considers the statement to be false, than in a conservative Republican. On the other hand, an identification of the statement as ironic also requires knowledge that the speaker believes the statement to be false. Thus, the comment is more likely to be considered amusing if the speaker is a liberal Democrat than if he is a conservative Republican.

These possibilities are captured by the sort of two-stage comprehension process proposed by Wyer and Radvansky (1999) and discussed earlier. That is, recipients first identify a statement's literal meaning on the basis of concepts and knowledge that are accessible in memory at the time and, in the course of this activity, spontaneously assess the validity and desirability of its implications (Barth, 1997; Wyer & Radvansky, 1999). However, they may only recognize that the statement's intended meaning differs from its literal meaning if its validity or desirability falls outside the range that they expect for communications that are apt to occur in the situation at hand. Thus, only in the latter case will they identify a statement as ironic or, perhaps, as a witticism.

One implication of this two-stage process is that people are only likely to consider a speaker's beliefs and attitudes in assessing the intended meaning of his or her statements if they perceive the statements to violate a normative principle of communication in the situation at hand. Thus, in the preceding example, liberal Democrats may be more amused by the statement "What this country needs is another Ronald Reagan" if it is uttered by another liberal Democrat (who presumably shares the recipient's belief that it is untrue) than if it is uttered by a conservative Republican.
Conservative Republicans who hear the statement may consider it to be true and therefore may not identify the statement as a witticism regardless of its source.

**Hostility and Teasing.** The preceding considerations also come into play when persons respond to statements about themselves. For example, statements that disparage the recipient are likely to be interpreted as a violation of the politeness principle and therefore may lead the recipient to infer that the speaker was only teasing and did not really intend the statement to be rude. One somewhat ironic implication of this possibility is that the more disparaging a statement's literal meaning, the more likely it is to be recognized as a violation of the politeness principle, and therefore the more likely it is to be identified as a tease rather than a genuine expression of the speaker's beliefs and opinions.

A speaker's statement can vary not only in politeness but also in accuracy, however. For example, suppose a 65-year-old man who is observed to have trouble balancing his checkbook hears the comment, "Life certainly becomes difficult as one approaches senility." If the man has confidence in his mental abilities, he may believe that the comment's implications that he is becoming senile as untrue rather than impolite, and this may stimulate him to consider whether the speaker also regards the statement as false. On the other hand, suppose the man is worried about the loss of his mental abilities. Then, he might perceive the communicator's statement's implications to be true and therefore might be inclined to take the statement literally regardless of other considerations.

In some cases, the implications of politeness and truthfulness principles can conflict. For example, after a man's third automobile accident in 2 years, a colleague may observe, "You are certainly a wonderful driver." If the man believes the speaker is aware of his driving record, he may reinterpret the statement as a criticism of his driving ability and not a compliment, but this reinterpretation would violate the politeness principle. As a result, the man may construe its intended meaning to be less disparaging than he would otherwise and might even be somewhat amused. This analysis assumes that politeness only comes into play once the truthfulness principle is applied; whether this is actually so is unclear, however, and no existing evidence bears on it.

**Comprehension of Emotion in Close Relationships**

The influence of conversational norms on the emotional impact of statements is particularly evident when the parties involved have a large pool of shared knowledge about both one another and life experiences more generally. Married couples often develop a "private meaning system" that permits them to communicate attitudes and opinions to one another without other listeners' awareness (Watzlawick et al., 1967). Thus, a man's comment that "Bali would certainly be a nice place to visit" would appear to most listeners to be a simple expression of opinion. His wife, however, might interpret the statement as a veiled expression of hostility toward her because of her unwillingness to take off work to make the trip. More generally, communications among partners in close relationships can take on an idiomatic character that others are unlikely to understand and appreciate (Bell, Buerkel-Rothfuss, & Gore, 1987; Hopper, Knapp, & Scott, 1981).

Shared knowledge, however, does not guarantee that people interpret one another's comments accurately. Moreover, the inaccuracy of their interpretations may
be particularly evident in the communication of emotions. For one thing, indirect expressions of emotion are inherently ambiguous. In addition, normative expectations exist that can interfere with comprehension. A study by Gaelick, Bodenhausen, and Wyer (1985) demonstrates these effects. Married couples engaged in a 10-minute discussion of a problem they were having in their relationship. Then, in a later session, they independently reviewed a videotape of the discussion and reported both their own and their partner's emotional reactions to specific things that were said. Two sets of findings emerged:

1. Persons attempted to reciprocate the emotion they perceived their partner had conveyed to them. However, only partners' intentions to convey hostility were perceived accurately. Consequently, expressions of hostility were actually reciprocated, whereas expressions of love were not.

2. When women did not attempt to convey any particular emotion in a statement, men interpreted the statement as an expression of hostility; however, women interpreted similar statements by their husbands as expressions of love. The authors attributed these misperceptions to the different expectations that men and women hold for one another, that is, women may expect men to be generally hostile and aggressive and so interpret relatively neutral emotional responses, which deviate from these expectations, as expressions of positive feelings. By the same token, men expect their female partners to be warm and nurturing and so interpret emotionally neutral expressions of feelings as relatively hostile.

In combination, these results have implications for the progression of an interaction. That is, a woman who makes what she considers to be an emotionally neutral statement to a man may be interpreted by the man as conveying hostility; and this may lead the man to express hostility in return. In contrast, a man who intends to convey neutral feelings to a woman may be interpreted by the woman as conveying love, and this may lead the woman to reciprocate these feelings in her response. Unfortunately, because expressions of love are generally not perceived accurately, the man may often not perceive the woman's intentions. As a consequence, hostility is more likely than love to be reciprocated and to escalate over an interaction.

Gender differences in the interpretation of communications and responses to them are not restricted to love and hostility. Tannen (1990), for example, noted that men and women differ in the types of social support they provide. Men prefer to give instrumental support, attempting to convince the victim that the problem is not serious and suggesting ways to resolve it. Women, on the other hand, prefer to receive emotional support, characterized by an acknowledgment of the problem and the legitimacy of their reaction to it. Consequently, men's attempts to convey support to women are often misperceived and unappreciated.

**Effects of Normative Expectations on Interpersonal Attraction**

When the individuals involved in a conversation are not well acquainted, different normative expectations may govern the communications that are exchanged. For example, conversation partners may expect one another to make comments to which they can respond easily, thereby maintaining the flow of conversation. In get-acquainted situations, in which people typically exchange information about themselves and explore common interests, the flow of conversation is typically maintained
both by asking questions and by responding to others' questions in enough detail to stimulate a response by the recipient. When this does not occur, the conversation becomes strained.

For example, consider the following interchange:

Q1. Where do you live?
A1. Well, I used to live in Detroit, but last year I moved to the south side of Chicago. What about you?

Compare this interchange with the following:

Q2. Where do you live?
A2. Chicago.

The second interchange, unlike the first, places the burden of the conversation back on the questioner, requiring him or her to search for a new topic to discuss. In addition, the questioner might interpret the respondent's failure to elaborate or to reciprocate the question as lack of interest in him or her or in the conversation more generally.

A study by Wyer, Swan, and Gruenfeld (1995) demonstrated these phenomena. Undergraduate students engaged in a get-acquainted conversation with someone of the same gender. On the pretense of controlling for the content of the conversations, one partner in a pair was told to insert five questions into the conversation of the sort one might normally ask when meeting someone for the first time (e.g., "Where are you from?" "Do you like school?"). Unbeknownst to the questioner, the other partner was told that the questions would be asked and to respond to them (a) by either giving a single-word answer or elaborating and (b) by either reciprocating the question or not. Participants were told that except for their answers to these specific questions, they should respond normally.

After participating in the conversation, questioners reported their reactions to both the conversation and their partner. Male participants' perceptions of the ease of conducting the conversation were primarily influenced by whether their partner reciprocated their questions, whereas female participants' perceptions were primarily determined by whether their partner elaborated. In both cases, however, participants' perceptions of the difficulty they encountered in conducting the conversation decreased both their liking for the conversation and their belief that their partner liked them. These factors then combined to decrease their liking for the partner.

A second study confirmed the assumption that questioners respond to norm violations by seeking explanations for their occurrence. In this study, questioners before engaging in the conversation were ostensibly exposed by mistake to a third person's trait description of the person with whom they would be interacting. These trait descriptions only influenced questioners' liking for partners whose responses to questions during the conversation deviated from normative expectations. In other words, questioners only considered these descriptions when they were motivated to seek an explanation for their partner's counternormative responses that the descriptions potentially provided.

These findings call attention to the inherent interrelatedness of communication and reception skills in social interaction. That is, individuals who are asked a question have two tasks. First, they must understand what it is the questioner wants to know. (We elaborate on the factors that influence this understanding in a later section of this chapter.) Second, they must respond in a way that is likely to facilitate the continuation
of the information being exchanged. A failure to fulfill either of these objectives is likely to have an adverse effect on the interaction and to interfere with further information exchange.

**Expectancy-Confirmation Processes**

There is yet another way in which expectations for another can influence communication in conversations. Specifically, one's expectations for another's behavior can influence one's own behavior toward this person, and this behavior, in turn, may elicit responses that confirm these expectations. This possibility was first demonstrated by Rosenthal and Jacobson (1966), who found that teachers' expectations for their students' ability influenced them to respond to the students in ways that influenced their actual classroom performance (for similar effects in other situations, see Rosenthal, 1993, 1994; see also Zanna, Sheras, Cooper, & Shaw, 1975).

Research by Mark Snyder and his colleagues provides more direct evidence of expectancy confirmation. In a study by Snyder, Tanke, and Berscheid (1977), for example, male and female students engaged in get-acquainted conversations with one another over the telephone. Before beginning the conversation, each male participant was shown a picture of either an attractive or an unattractive woman and told that it was his conversation partner. In fact, the pictures bore no relation to the women's actual physical appearance. The women's comments during the conversations were recorded and later replayed to blind judges who rated them in terms of likeableness and friendliness. Women were rated as friendlier and more appealing if the man to whom they had been talking believed they were attractive than if he did not. Apparently, men who believed their partner was attractive conversed in a way that actually elicited warmth and friendliness, whereas men who believed she was unattractive conversed in a way that elicited aloofness.

In a quite different study, Snyder and Swann (1978a) showed that participants who were led to believe that another person was likely to be hostile and aggressive behaved toward this person in ways that actually elicited aggressive behavior (as reflected in the shocks the person administered to the participant for making errors in a learning task). Thus, both this study and Snyder et al.'s (1977) indicate that when people expect someone to respond to them in a particular way, they often behave toward the person in a way that elicits these responses, thereby confirming their expectations.

The expectancy-confirmation processes identified by Snyder and his colleagues are of clear social importance. For example, they could contribute to the tendency for physically attractive individuals to acquire more effective interpersonal skills than unattractive individuals (Berscheid & Walster, 1974). On the other hand, they also suggest that people who hold a negative stereotype of a social group may behave toward individual group members in ways that confirm this stereotype, leading the stereotype to be perpetuated.

**THE ROLE OF COMMUNICATION PRINCIPLES IN PERCEPTIONS OF A COMMUNICATOR'S INTENT: IMPLICATIONS FOR RESPONSES TO QUESTIONNAIRES AND OPINION SURVEYS**

As the preceding discussion testifies, the reception and transmission of information in a social interaction are often inextricably intertwined. In a conversation, for example, one party's statements often depend on this individual's interpretation of the
statements that others have made earlier. This dependence is most obvious in the
process of responding to questions. In these instances, a person's answer is obviously
determined by his or her perception of the meaning of the question and what sort of
information is being requested.

The principles of communication identified by Grice (1975) and others presum-
ably govern these processes. That is, people who are asked a question are usually
motivated to answer it in a way that is both informative and accurate. To do so, how-
ever, they must be able to understand what it is that the questioner really wants to
know. In addition, they must be able to predict whether the questioner will be able
to understand their answer. For example, suppose a man is asked, "Where do you
live?" To answer this question in a way that will be informative, he must infer whether
the questioner is interested in his country of origin or his street address. To make this
inference, however, he must be able to predict what the questioner already knows
or assumes about his place of residence. Thus, the man is likely to give his country
of origin if he is asked, "Where do you live?" in London by a stranger who has no
knowledge at all about his nationality. He may give his street address if he is asked
the question by a local resident of his community.

These comprehension processes are obviously not restricted to questions asked
in informal conversations. They also come into play when individuals respond to
questions in interviews, opinion surveys, or questionnaires. Some of the most in-
teresting work to emerge on the role of communication principles in these situa-
tions has been conducted by Norbert Schwarz, Fritz Strack, and their colleagues (for
reviews, see Schwarz, 1994; Strack, 1994). Schwarz and Strack note that the rules
that govern these questions and answers are similar to those that govern commu-
nication processes in informal conversations. To this extent, an understanding of
the role of communication principles in responding to questionnaires and opinion
surveys has implications for communication phenomena in more informal social sit-
uations as well. In the discussion to follow, we consider several different conditions in
which respondents are requested to communicate an opinion or judgment to others
in a questionnaire. We first discuss the manner in which respondents interpret the
meaning of a question they are asked, and the manner in which this interpretation
influences the responses they make. Second, we discuss the processes that under-
lie respondents' interpretation of the "language" they are asked to use in reporting
their answers under conditions in which the meaning of this language (e.g., numbers
along a response scale) is unclear.

The Role of the Informativeness Principle in Interpreting
and Responding to Questions

People who are asked a question are likely to assume that they are being requested
to provide information that the questioner does not already have. As Schwarz (1994)
and Strack (1994) both have pointed out, this can have somewhat ironic implica-
tions. Researchers often include several items pertaining to the same characteristic in
a questionnaire in an attempt to increase the reliability of their measure. To ensure that
the items are assessing the same thing, they are often very similar except for minor
changes in wording. In fact, the inclusion of these items can often decrease reliability
rather than increasing it.

This possibility was confirmed in a series of studies by Strack, Schwarz and their
colleagues (Ottati, Riggle, Wyer, Schwarz, & Kuklinkski, 1989; Schwarz, Strack, &
Mai, 1991; Strack, Martin, & Schwarz, 1988; Strack, Schwarz, & Waenke, 1991). In
the study by Ottati et al. (1989), for example, participants reported their agreement with each of several general propositions pertaining to social liberties (e.g., “People should have the right to express their views in public”). Before judging each proposition, however, they responded to a similar proposition about a specific group that was either desirable (e.g., “The American Civil Liberties Union should have the right to express its views in public”) or undesirable (e.g., “The American Nazi Party should have the right . . .”). In one condition, the group-specific proposition and the general proposition were separated in the questionnaire by six other, unrelated items. In this case, agreement with the general proposition was greater when the specific proposition referred to a desirable group than when it referred to an undesirable one. Thus, the body of knowledge that respondents used to evaluate the first, group-specific proposition was apparently applied in evaluating the general one as well.

In a second condition, however, the two propositions occurred together in the questionnaire. In these conditions, references to an undesirable group in the first proposition increased respondents’ agreement with the general proposition. In this case, respondents’ attempts to convey new information apparently led them to use different criteria to evaluate the general proposition than they had used to judge the group-specific one. For example, persons who evaluated a statement pertaining to the American Nazi Party may have responded to the general item as if it meant “Except for the American Nazi Party, people should have a right to express their views in public.” As a result of this exclusion, their agreement with the proposition increased relative to conditions in which the excluded group was favorable.

Inferences of Response Criteria From Question Wording

Respondents’ perceptions of the criteria they should use in answering a question can depend in part on how the question is worded. For example, questions can sometimes presuppose a certain type of answer. For example, “Did you see the stop sign?” unlike “Did you see a stop sign?” presupposes that a stop sign had actually been there to be seen. Thus, as studies by Loftus (1975) show, people who have watched a movie are more likely to respond affirmatively if they are asked the first type of question than if they are asked the second type. Furthermore, people in the first condition are relatively more likely to mention having seen the object at some later point in time, even though it had not actually been shown.

The presuppositions that underlie questions are often unintended. For example, people who wish to decide if a person has a certain attribute may spontaneously think of characteristics that are associated with the attribute and ask questions about them. Thus, for example, they may ask questions such as “What do you like about parties?” if they are trying to find out if a person is extroverted but ask “When do you like to be alone?” if they want to find out if the person is introverted (Snyder & Swann, 1978b). People regardless of their inclinations toward extroversion or introversion can usually identify at least a few things they like about parties and also a few times they like to be alone. Consequently, their responses to such questions will appear to confirm the hypothesis that the questioner is testing regardless of which hypothesis it happens to be.

People may sometimes intentionally convey biasing information through the questions they ask (Wegner et al., 1981). Persons who hear a question may infer that the questioner is requesting new information. That is, they assume that the answer could be either affirmative or negative, and the questioner is not sure which is the case. Thus, they may interpret a question such as “Does Senator Smith belong
to the Ku Klux Klan?" as an indication that there is some reason to suppose that Smith might, in fact, be a member of the organization. Consequently, as Wegner et al.'s (1981) findings suggest, people who are asked such a question might increase their belief that Smith is probably a racist.

In opinion surveys, respondents sometimes infer the answer a questioner expects from the response alternatives that are provided. Moreover, the inference may influence not only their answer to the question at hand but other responses as well. A series of studies by Schwarz and his colleagues are illustrative. In one study (Schwarz, Hippler, Deutsch, & Strack, 1985), some participants were asked to report their daily television viewing habits by checking an alternative along the following scale:

- up to 1/2 hour
- 1/2-1 hour
- 1-11/2 hour
- 11/2-2 hours
- 2-21/2 hours
- over 21/2 hours

Others, however, were asked to report their television viewing along the following scale:

- up to 21/2 hours
- 21/2-3 hours
- 3-31/2 hours
- 31/2-4 hours
- 4-41/2 hours
- over 41/2 hours

The authors speculated that persons would infer the typical amount of television watched to be near the middle of the scale they were given and would compare their own viewing habits to this standard. In fact, the actual amount of time spent watching television by participants in the study averaged about 2 hours. Consequently, most participants who received the first, low-frequency scale were likely to believe that their viewing behavior was above average, whereas those who received the second, high-frequency scale were likely to believe it was below average. After reporting their television viewing behavior, participants were asked to indicate how satisfied they were with their leisure time. Participants reported feeling less satisfied if they had reported their television viewing behavior along the low-frequency scale than if they had responded along the high-frequency scale. In other words, respondents, who presumably considered television watching to be a waste of time, inferred whether they were above or below average in this activity from the range of response alternatives they were given, and this inference influenced their estimates of satisfaction. Survey research in other knowledge domains has similar implications (cf. Schwarz & Scheuring, 1988).

When the behaviors to be estimated are more ambiguous, the response alternatives that communicators are given can influence their interpretation of the characteristic being judged. This was demonstrated in a study by Schwarz, Strack, Mueller, and Chassein (1988). Some participants were asked to report how often they felt "irritated" along a scale ranging from "several times a year" to "less than once every 3 months."
Others were asked to do so along a scale from “several times daily” to “less than once a week.” Later, all participants were asked to give examples of things that irritated them. In the absence of a clear definition, participants inferred that “irritated” referred to more extreme emotional experiences when they were exposed to the first, low-frequency scale (suggesting that irritating events were fairly rare) than if they were exposed to high-frequency scale. Consequently, they listed more extreme annoyances in the first case than in the second.

Communication Principles in Response Scale Use

People are often expected to express their opinions in subjective terms. For example, a person may describe a colleague as “fairly intelligent” rather than reporting her scores on an IQ test, and may refer to a baby as “really big” rather than describing its size in pounds or inches. In many cases (e.g., when people are asked to report their liking for a person or social policy), objective units of judgment do not even exist.

When people are asked questions of this sort, therefore, they must make implicit assumptions about how the questioner will interpret the language they use to convey their judgments. These assumptions may often be based on their perception of the range of values that the questioner has in mind when asking the question. Thus, a woman may respond “really big” to a question about the size of her baby, but may respond “rather small” to a question about the size of her apartment, although the apartment is obviously much larger than the baby. This is because she assumes that the questioner wants to know the size of each object in relation to other objects of the same general type rather than all objects that exist in the world. Similarly, a research physicist may describe a colleague as “rather stupid” based on the implicit assumption that the questioner is interested in his appraisal of the colleague in relation to other physicists rather than individuals in the general population.

These considerations, which occur in everyday conversation, also come into play in research. In the social sciences, for example, participants are often asked to report their judgments of a person, object, or concept along numerical response scales. Moreover, the scales are typically defined in subjective rather than objective units. For example, a person might be asked to judge a person’s intelligence by placing a check along a scale from $-5$ (very unintelligent) to $+5$ (very intelligent), or to estimate the desirability of a social policy along a scale from $-5$ (very undesirable) to $+5$ (very desirable). These scales essentially require respondents to use an unfamiliar “language” in reporting their judgments. To communicate these judgments in a way the recipient will understand, the respondents must be able to translate this language (i.e., the numerical values along the response scale) into their own language (i.e., subjective values of the attribute they are asked to judge), and this translation requires implicit assumptions about the meaning that the questioner assigns to these labels. When these assumptions are incorrect, miscommunication is inevitable.

A formal description of the processes that underlie a respondent’s translation of values along a response scale into subjective values of the attribute to which the scale refers has been proposed by Parducci (1965) and Upshaw (1969; Ostrom & Upshaw, 1968). To convey its implications, suppose a woman is asked about the intelligence of an acquaintance, P, who comes from the same small mining town in Ohio where she herself grew up and who, like herself, became a research physicist. Suppose further that the woman has had a broad range of experiences with people that represent different subjective levels of intellectual ability and perceives P to be near the middle of this range, as indicated in Fig. 8.3a. Thus, if she is asked to
A. Subjective Continuum of intellectual ability

B. Response Scale including all persons

C. Response Scale including only university professors

D. Response Scale including only hometown residents

FIG. 8.3. (a) Locations of known persons along a subjective continuum of intellectual ability and positions of a category response scale to include (b) the full range of known persons, (c) only university professors, and (d) only residents of the communicator’s home town. Arrows denote the projected rating of a hypothetical person, P, onto these scales.

estimate P’s intelligence along a scale from \(-3\) (very low) to \(+3\) (very high) and is communicating to an unspecified audience, she might subjectively position the scale to include the most intelligent and least intelligent persons she has encountered in the past, as shown in Fig. 8.3b and might then map P’s position onto the scale, thus assigning P a relatively neutral value (0).

However, suppose the woman is asked her opinion by someone at her university. Then, she might assume that the questioner is concerned only with research physicists and that the scale she is asked to use pertains only to people of this type, as shown in Fig. 8.3c. Alternatively, if the questioner is someone from her home town in Ohio, she might infer that she is expected to consider only persons of the sort she has encountered in this community and might position her scale as shown in Fig. 8.3d. If she maps P onto these scales in order to report her judgments, she would appear to judge P to be of relatively low intelligence in the first case, but to be of relatively high intelligence in the second. This could occur despite the fact that she has the same subjective opinion of P’s intelligence in all cases.

A general implication of the preceding analysis is that the higher the range of stimulus values to which respondents believe a response scale refers, the lower the value they will assign to any given stimulus along the scale. Respondents’ assumptions about this range can be influenced by not only their perceptions of the questioner’s objectives and expectations but the situational context in which the question is asked. Thus, the woman in our previous example might be more inclined to evaluate her colleague’s intelligence in relation to other research physicists (and therefore report
him as less intelligent if she is asked about the colleague in her office at the university than if she is asked in a bar, and this might be true regardless of the person to whom she is communicating.

Once respondents report a judgment, however, this response presumably becomes part of their accumulated knowledge about the object being judged. Consequently, they may later retrieve this response out of its original context and use it as a basis for both additional judgments and behavioral decisions (Sherman, Ahlm, Berman, & Lynn, 1978; see also Higgins & Lurie, 1983). As Sherman et al. (1978) found, for example, people rated recycling as less important when it was presented in the context of other, very important social issues (e.g., nuclear disarmament) than when it was presented in the context of trivial ones (e.g., pay-on-entry buses). Later, however, they recalled their rating out of context and used it as a basis for deciding whether to help out on a recycling project, volunteering less help in the former condition than the latter.

Summary

The effects we have described in this section have obvious methodological implications for research that uses opinion surveys and questionnaires to assess attitudes and opinions. They also have implications for social communication processes more generally. In informal conversations, people must also decide what language to use in conveying their opinions to others. Many of the factors that govern people’s responses to questionnaires in the more formal survey situations described in this section are therefore likely to have their counterparts in these conversations as well.

MESSAGE RECEPTION IN A NONSOCIAL CONTEXT: EFFECTS ON PERSUASION, IMPRESSION FORMATION, AND PERCEPTION OF SOCIAL REALITY

Our discussion thus far has focused on message reception under conditions in which messages are expected to be both truthful and informative; these conditions do not always exist. In many instances, for example, a communicator’s objective is to persuade the recipient to adopt a particular point of view or to convey a favorable or unfavorable impression of the person or object being described. A conceptualization of message reception under these conditions requires an understanding of both the factors that influence recipients’ perceptions of the communicator’s objective and also their motivation to take these factors into account in responding to his or her message. This motivation, in turn, can depend on the importance of the issue to which the message pertains. The last section of this chapter is concerned with these matters.

Persuasive communications can be of two types. Some messages concern a topic in which recipients have a personal interest and advocate a position with which they are likely either to agree or to disagree. Recipients of such a message are usually motivated to evaluate its implications at the time they receive it. Other communications concern people and objects about which recipients have little if any prior knowledge and do not have strong preformed opinions. These messages are typically intended to create a favorable or an unfavorable impression of their referent rather than to change an existing one. Advertisements and television commercials, for example, concern topics in which recipients typically have little immediate interest at all. Although recipients of these latter messages are likely to be aware of the communicator’s intentions to persuade them to adopt a particular attitude or
behavior, they nevertheless spend little cognitive effort in evaluating the validity of the information. Before considering the factors that influence the reception of these two types of messages, a more general discussion of the processes that theoretically underlie responses to persuasive messages is desirable.

Theories of Persuasion

Current research on communication and persuasion has been based in large part on two theoretical formulations proposed by Petty and Cacioppo (1986) and Chaiken (1980, 1987). However, these conceptualizations have their roots in a more general formulation of information processing developed by McGuire (1968, 1972). We first describe briefly this more general conceptualization and then discuss similarities and distinctions between the theories that are derived from it.

**McGuire’s Information-Processing Model.** McGuire (1968, 1972) identified several different stages of processing that can mediate the impact of a persuasive message on judgments. Two stages of particular importance concern (a) the recipients’ comprehension of the message content¹ and (b) their attempts to refute the validity of its implications (e.g., to counterargue). The amount and type of processing that occurs at each stage can depend on the implications of the information presented, the consistency of these implications with recipients’ prior knowledge, and recipients’ perception of the communicator’s intention (e.g., to persuade or simply to inform).

McGuire (1968) noted that the persuasive impact of a message is likely to increase with recipients’ ability to comprehend it, but to decrease with their ability and motivation to refute its validity. This means that if a situational or individual-difference variable (e.g., distraction, the recipient’s general intelligence and knowledge about the issue, etc.) has simultaneous effects on both comprehension and counterarguing, it can often have a nonmonotonic effect on the communication’s influence. This can be seen from the equation

\[ P(I) = P(R)[1 - P(CA)] \]

where \( P(I) \) is the probability of being influenced, \( P(R) \) is the probability of receiving and comprehending the message’s implications, and \( P(CA) \) is the probability of effectively counterarguing these implications. Note that \( P(I) \) is less when \( P(R) \) and \( P(CA) \) are either both low (e.g., .1) or both high (e.g., .9) than when they are both moderate (e.g., .5). Thus, for example, people with little knowledge about the topic may be unable to comprehend it fully, and so they are not influenced by it for this reason. Very knowledgeable persons, on the other hand, can comprehend it but also can refute its implications. Consequently, they may also not be influenced. The message may be most effective on persons who are only moderately knowledgeable and therefore are reasonably able to comprehend it but find it moderately difficult to refute. Situational distraction that simultaneously influences both reception and counterarguing may be nonmonotonically related to communication influence for similar reasons.

¹ McGuire did not distinguish between the two aspects of comprehension; we discussed in earlier sections of this chapter (i.e., the identification of the literal implications of information and a construal of its pragmatic, or intended, implications; however, both of these aspects of comprehension are presumably involved.
The interactive effects of ability and message factors can also be conceptualized in terms of this equation. Suppose a message is moderately easy to comprehend and refute by recipients who have little knowledge about the topic and have little ability to assess its implications (i.e., in terms of Equation 8.1, \( P(R) = P(CA) = .5 \)). Then increasing the recipients' ability both to comprehend and to refute the message (i.e., \( P(R) = P(CA) = 9 \)) should decrease the message’s impact. In contrast, suppose the message is extremely difficult to comprehend and refute in the absence of these reception skills (e.g., \( P(R) = P(CA) = .1 \)). Then increasing these skills should increase the message’s influence. (For a more detailed discussion of the implications of Equation 8.1, see Wyer, 1974.)

These considerations call attention to the need to consider both participants' ability to comprehend and evaluate the content of a persuasive message and the nature of these cognitive activities. The importance of considering persons' cognitive responses to a persuasive message was established by Greenwald (1968). He found that the influence of a message was more strongly related to the implications of the thoughts that recipients reported having while reading a message than by the content of the message that they could recall at the time their attitudes were assessed. More recent research (for reviews, see Eagly & Chaiken, 1993; Petty & Cacioppo, 1986; Petty, Priester, & Wegener, 1994) confirms the fact that recipients' recall of a message's content only predicts its impact when their cognitive elaboration of this content is minimal, for example, when they are unmotivated to think about the message's implications (Haugtvedt & Petty, 1992) or are distracted from doing so (Mackie & Asuncion, 1990).

In some instances, however, people's thoughts may not concern the message content at all but may focus on peripheral aspects of the message or the conditions in which it is presented. The formulations of communication and persuasion proposed by Petty and Cacioppo (1986) and by Chaiken (1980, 1987) specify the conditions in which this is the case. Both theories recognize the need to consider the nature of individuals' cognitive responses to a persuasive communication in predicting its impact. They differ in their specification of the conditions that give rise to these assessments, however.

**Petty and Cacioppo's Elaboration Likelihood Model**

Petty and Cacioppo (1986) postulated two alternative routes through which a persuasive message can be effective. The first, the central route, requires effortful cognitive activity in which recipients draw on both past experience and previously acquired knowledge in assessing the validity of the message's content and implications. When recipients are either unable or unmotivated to engage in this extensive cognitive activity, however, they choose a peripheral processing mode that does not require a careful evaluation of the message arguments. For example, they may base their responses to the message on the credibility of its source (Chaiken, 1980) or on the affect they happen to be experiencing and attribute to positive or negative feelings about the position being advocated (Schwarz & Clore, 1983, 1988). The relative likelihood of choosing these two processing strategies can depend on a number of situational and individual-difference factors that influence one's motivation or ability to think about the message (e.g., recipients' personal interest in the topic, their general desire to engage in cognitive activity, or situational distraction (for a summary of these and other effects, see Petty et al., 1994).
Chaiken's Heuristic-Systematic Processing Model

Chaiken (1980, 1987) made a distinction between systematic and heuristic processing that is similar in most respects to the distinction between central and peripheral processing postulated by Petty and Cacioppo: Systematic processing entails a detailed analysis of the message's content, whereas heuristic processing typically involves the use of criteria that can be applied quickly and easily with a minimum of cognitive elaboration. Chaiken's conceptualization differs from the elaboration likelihood model in one important respect. Petty and Cacioppo appear to have assumed that the choice of a particular mode of processing occurs at the time a message is encountered and that recipients employ one mode or the other but not both. In contrast, Chaiken assumed that heuristic criteria are always applied first, and systematic processing comes into play only when these criteria prove to be inadequate.

More specifically, individuals with a particular processing objective are postulated to have a level of confidence that they consider sufficient for making a judgment or decision. When they receive a message, they evaluate its implications on the basis of the criterion that is simplest and easiest to apply, and then assess their confidence that these implications are valid. If this confidence exceeds a threshold, they base their judgment or decision on this criterion without engaging in further processing. Otherwise, they resort to other criteria that may require more extensive processing and assess the implications of these criteria as well, continuing until the level of confidence necessary to make a decision is reached. This latter, more extensive processing is likely to include an evaluation of the message content. Recipients' confidence threshold presumably increases with the importance of the issue addressed by the message and the judgment or decision to be made on the basis of it. It can also depend on the difficulty of processing the message content (e.g., the subjective cost associated with engaging in extensive cognitive activity). Therefore, the likelihood of relying on heuristic criteria rather than conducting a careful analysis of the message content varies correspondingly.

Chaiken's conceptualization, like Petty and Cacioppo's, suggests that when recipients are either unable or unmotivated to think extensively about a message, aspects of the message and its communication context are simplest and easiest to evaluate (e.g., the prestige of its source) are likely to have greater influence. However, whereas Petty and Cacioppo's (1986) theory assumes that people make an a priori decision as to which criterion to apply, Chaiken's (1980) theory assumes that people engage in extensive processing of the message content in addition to heuristic processing when the latter criteria prove insufficient. To the extent that the cognitive activity involved in central (or systematic) processing requires reception and comprehension of the message's content and attempts to refute its validity, each conceptualization is compatible with the more general processing formulation suggested by McGuire (1968, 1972). That is, the theories can simply be viewed as alternative hypotheses concerning the conditions in which the cognitive activities postulated by McGuire will in fact be performed.

The Influence of Counterattitudinal Messages on Highly Involved Recipients

McGuire's (1968, 1972) theory is particularly useful in conceptualizing the processes that underlie persuasion when recipients of a message oppose the position it advocates and therefore are motivated to attend to the message's content. If such a message is both easy to comprehend and easy to refute, it should theoretically have
little impact; however, preventing recipients from thinking about such a message (thereby decreasing both comprehension and counterarguing) should increase the communication’s influence (see Equation 8.1). These implications are confirmed by evidence that when recipients hear a message advocating a position with which they initially disagree, they are more persuaded when they are distracted from attending to the message than when they are not (Festinger & Maccoby, 1964; Osterhouse & Brock, 1970). Note, however, that if a message is moderately difficult to comprehend and refute in the absence of distraction, situational factors that further decrease comprehension and counterarguing should decrease the message’s impact rather than increase it. Research supports this possibility as well (Regan & Cheng, 1973).

An interesting factor to consider in this context is the general level of affect that participants experience at the time they receive a communication. For example, participants who experience positive affect appear unmotivated to engage in cognitive activity that they consider unpleasant (Schwarz & Clore, 1988, 1996). To this extent, they may be less inclined to devote cognitive resources to thinking about a countearantidotal message with undesirable implications. Consistent with this speculation, Bless, Bohner, Schwarz, and Strack (1990) found that happy persons, unlike unhappy ones, were equally persuaded by a persuasive message regardless of whether the arguments contained in it were weak or strong. These participants were apparently unmotivated to expend the cognitive effort necessary to refute the message content regardless of their ability to do so (but see Wyer & Srull, 1989, for an alternative interpretation). If persons read a persuasive message that they expect to be enjoyable, however, they may be more motivated to think about its content and consequently may actually be more sensitive to differences in the quality of arguments contained in it than are other, less happy individuals (Wegener, Petty, & Smith, 1995).

**Resistance to Persuasion**

Perhaps the most important aspect of McGuire’s (1968) conceptualization concerns its implications for the factors that influence the ability to resist being influenced by a persuasive message. An impressive series of studies by McGuire (1964) demonstrated that recipients’ resistance to an attack on their initial point of view was minimally influenced by giving them information that supported this point of view before the attack was administered. Giving them information that permitted them to refute arguments against their position was much more effective, however. Moreover, giving participants practice in refuting arguments against their position also increased their resistance to persuasion, and this was true even though the arguments that participants practiced refuting differed from those in the persuasive message they encountered subsequently. Evidence obtained in a marketing context (Szybillo & Heslin, 1973) confirms these effects.

Finally, and perhaps most important, McGuire (1964) reported evidence of an “inoculation” effect. That is, merely exposing participants to a mild attack on their point of view, even without explicitly asking them to refute it, called attention to their vulnerability and stimulated them to engage spontaneously in the cognitive activity required to refute these arguments. This spontaneous practice increased their resistance to a persuasive message they encountered subsequently.

**Source Effects on Persuasion.** Recipients’ responses to a communication are clearly influenced by their perceptions of its source. These perceptions can pertain both to the purpose for which the communicator is transmitting the message and
his or her personal characteristics (e.g., expertise, trustworthiness, or general attractiveness). As noted earlier, the effects of these perceptions on message impact are presumably mediated by their influence on both recipients’ attention to the message content and the type and implications of their cognitive responses to it. Thus, people are more likely to use the credibility of the source as a basis for evaluating a message when their motivation is low (Chaiken, 1980). However, the source of a message can also determine the way in which its content is thought about, and can therefore affect its impact for this reason as well.

For example, recipients are more likely to think carefully about the quality of the arguments contained in a message if they perceive that the communicator wishes to influence their attitudes or behavior than if they perceive that he or she is simply trying to be informative. Schwarz, Kumpf, and Bussmann (1986), for example, found that descriptions of a new textbook had less impact if it was ostensibly taken from an advertisement than if it was described as a book review. Moreover, it was less influential if it contained a statement that was explicitly intended to persuade them to purchase the book than if it did not. An earlier study by Freedman and Sears (1965) had similar implications.

In addition, people’s cognitive responses to a message can depend on why its source is positively regarded (Petty & Wegener, 1998). In a classic study by Kelman (1958), for example, some persons received messages from a source who ostensibly had the power to reward them. These messages only influenced the attitudes that recipients reported when they believed that the source would have access to their responses. When the same message was attributed to a high prestige peer, it had an influence even when recipients reported their attitudes privately; however, this influence dissipated over time. The message only had an enduring influence on recipients’ attitudes when it ostensibly came from a source who had high knowledge and expertise in the area to which it pertained. Thus, only in the latter conditions did the message appear to induce a true underlying change in participants’ opinions.

In the context of the considerations raised earlier, Kelman’s results suggest that messages from a source with coercive power may stimulate counterarguing and thus may induce little underlying attitude change despite public compliance with the position advocated. In contrast, the content of messages from a source whose opinions are believed to be socially desirable may not be paid much attention at all. That is, recipients may conform to the position being advocated without evaluating the message arguments, and so the effects of the message do not persist over time once the source is no longer salient.

The persisting impact of a message from a highly knowledgeable source could be a result of two factors. First, participants’ memory for the source’s expertise and the validity of his or her opinion might persist over time and therefore be used as a basis for reporting attitudes toward the position advocated independently of the content of the communication itself. Second, an expert source might stimulate recipients to think more about the message content without trying to refute its validity, and so the effect of this content persists even after the source has been forgotten. The second of these possibilities seems more viable. For one thing, research in a number of paradigms indicates that participants are inclined to forget the source of information they receive while retaining implications of the information itself (Hasher, Goldstein, & Toppin, 1977; Jacoby, Kelley, Brown, & Jaseckio, 1989). This suggests that the persuasive impact of the information in Kelman’s study was not a result of their memory for its source, but resulted from the source’s impact on recipients’ attention to the message.
content—an influence that persisted even though the recipient no longer thought about the source of the message.

A further manifestation of this dissociation between the source of a message and the message content is the "sleeper effect". The influence of a message that comes from a negative source appears to increase as time goes on (Hovland, Lumsdaine, & Sheffield, 1949; Cook, Gruder, Hennigan, & Flay, 1979). This effect is presumably attributable to the fact that the negative impact of the source decreases over time, leading the effect of the message content to be more apparent. Although the reliability of the sleeper effect has been questioned (Gillig & Greenwald, 1974), its failure to occur could be in part due to the fact that few credible sources actually have negative impact. (That is, their opinions are more likely to be wrong than to be right.) Rather, these sources are simply disregarded and have no impact whatsoever. Sources with "negative credibility" may be more common in some domains than others. For example, unpleasant advertisements may decrease product evaluations immediately after they are viewed but can have a positive influence on these evaluations after a delay (Moore & Hutchinson, 1995). Although the negative ads are unpleasant, they apparently increase attention to the substantively favorable information presented about the product and lead this information to be retained in memory. As a result, the information has a positive influence on judgments after the source is no longer salient.

Few studies have examined the cognitive mechanisms that underlie source effects on communication impact. An exception is a study by Birnbaum and Stegner (1979), in which participants judged the amount of money an automobile was worth on the basis of (a) its blue book value and (b) the opinion of a person who varied both in expertise (i.e., knowledge about cars) and bias (reflected in whether the person was a friend of the buyer or a friend of the seller). The expertise of the source influenced the weight attached to the information, whereas bias influenced recipients' perception of the information's implications. (That is, the source's estimate was perceived to imply a higher value if he was a friend of the buyer than if he was a friend of the seller.)

**Implications for the Influence of Message Reception Skills**

The impact of persuasive messages that oppose one's a priori beliefs and opinions is clearly influenced by the motivation and ability to think carefully about the messages' implications. This motivation and ability, in turn, depends on recipients' prior knowledge about the topic to which the message refers. More general motivational factors, such as the desire to engage in cognitive activity (Cacioppo & Petty, 1982) or need for closure (Kruglanski & Webster, 1996) can also influence the nature of recipients' cognitive responses to a persuasive message. When persons report their responses to a message publicly, factors such as self-monitoring (Snyder, 1987) can also play a role (for a discussion of this possibility, see Hewes, 1995). Finally, quite independently of the motivation to refute the content of a persuasive message and the knowledge required to do so, practice in refuting arguments that favor the position being advocated can have an important impact on the later ability to avoid being influenced (McGuire, 1964).

Although message reception ability obviously influences the processing of a persuasive message, its impact on the influence of any given message is difficult to predict. As noted earlier, an increase in the ability to comprehend and assess the implications of a counterattitudinal message can decrease its influence if the message is fairly easy to understand in the absence of special skills; in contrast, an increase in reception skills could increase the influence of a message that is inherently difficult
to understand and refute. Consequently, general conclusions concerning the effects of message reception ability on message impact are difficult to draw.

**The Impact of Messages on Impression Formation**

The preceding discussion was devoted primarily to the impact of persuasive messages that advocate positions with which recipients are likely to disagree. Many messages, however, concern persons and objects about which recipients are unfamiliar and have no clear a priori opinions. Recipients may nevertheless be motivated to evaluate the implications of the message and to arrive at an accurate impression of the person or object to which it refers. Thus, for example, people may wish to decide whether a defendant in a court trial is guilty or innocent, to vote for a political candidate, to hire someone as a research assistant, to invite a new acquaintance out for dinner, or to buy a car. The question is how to use the information available to form such impressions.

Chaiken's (1980, 1987) conceptualization has implications for the particular aspects of a message that recipients are likely to consider in such conditions. To reiterate, she noted that recipients first use the criterion that comes to mind most quickly and is easiest to apply and that they perform a more detailed evaluation of the information available only if their confidence in the validity of the first criterion is below some minimal threshold. The question arises as to what these simplifying, "heuristic" criteria might be. Two bodies of research and theory that bear directly on this question surround (a) the role of stereotypes in perceptions and judgments of individuals and (b) the impact of people's affective reactions on their evaluations of the persons and objects to which these reactions are attributed.

**The Impact of Stereotypes on Responses to Communications**

The influence of stereotypes on judgments and behavioral decisions has been a major concern of social scientists since the time of Lippman (1922) and continues to one of the most extensively researched topics in psychology (for reviews, see Hamilton & Sherman, 1994; Fiske, 1998). Early theory and research assumed that the use of stereotypes was largely a result of prejudice and hostility toward the stereotyped group (cf. Allport, 1954; Katz & Braly, 1933). However, more research has revealed that the impact of stereotypes on social perception and judgment is more pervasive than had originally been assumed. This influence is therefore worth discussing in some detail.

Stereotypes are typically viewed as "abstract knowledge structures linking a social group to a set of traits or behavior characteristics" (Hamilton & Sherman, 1994, p. 3; for a similar definition, see Bodenhausen & Macrae, 1998). These structures can consist of trait and behavior concepts that are applied to a particular ethnic or social group (women, African Americans, fraternity members, etc.). These concepts can influence responses to messages about a stereotyped individual in a number of ways. Most obviously, they can be used as direct bases for judging the individual independently of any other relevant information that might be available (Bodenhausen & Lichtenstein, 1987; Futoran & Wyer, 1986). Perhaps more provocative is the evidence that once a stereotype is activated in memory, the concepts contained in it may influence the processing of information about other individuals to whom the stereotype is objectively irrelevant (Devine, 1989; Lepore & Brown, 1997). Moreover, these effects can occur in the absence of awareness. In some instances, people who are aware that a stereotype might be influencing their judgments and behavior attempt to compensate
for its influence. In doing so, however, they may actually overcompensate, thus responding in a way that is opposite to that implied by the stereotype. Furthermore, attempts to suppress the use of a stereotype at one point in time can actually increase its use once conscious efforts to suppress it are no longer made. Research bearing on these possibilities is summarized in the sections that follow.

Stereotypes As Judgmental Heuristics. The most obvious influence of stereotypes surrounds their use as direct bases for judgment. That is, an individual who belongs to a stereotyped group may be inferred to possess attributes that are believed to be typical of group members. To the extent stereotypes have some basis in reality, this is not entirely inappropriate. Locksley and her colleagues (Locksley, Borgida, Brekke, & Hepburn, 1980; Locksley, Hepburn, & Ortiz, 1982), for example, found that participants were inclined to base a male or female target person's assertiveness on a description of the person's behavior in a particular situation alone, without taking into account the fact that proportionately fewer women are assertive than men. Thus, their judgments were suboptimal according to Bayes's theorem. In other words, ignoring stereotypes entirely can sometimes be as biasing as relying on them exclusively.

As Chaiken's (1980) theory suggests (see also Petty & Cacioppo, 1980), people's tendency to use a stereotype as a judgmental heuristic may depend on their perception of the cognitive effort necessary to evaluate the implications of other available information. That is, people may be more inclined to employ a stereotype if the judgment they expect to make is complex and effortful than if it is not. In one demonstration of this contingency, Bodenhausen and Lichtenstein (1987) gave participants a transcript of a court case involving assault in a bar. In some cases, the defendant was assigned a nondescript name and place of residence (e.g., "Robert Johnson, from Dayton, Ohio") and in other cases a name that identified him as Hispanic ("Carlos Ramirez, from Albuquerque, New Mexico"). Some participants read the transcript with the expectation that they would be asked to judge the defendant's hostility (a relatively simple judgment that could be made on the basis of the defendant's behavior alone). Others were told that their goal was to assess his guilt (a complex judgment requiring an integration of several factors other than the defendant's behavior). After reading the information, however, all participants judged both the defendant's hostility and his guilt regardless of which judgment they had anticipated making.

Participants who expected to make a simple (trait) judgment formed an impression of the defendant on the basis of the transcript information that had implications for his hostility. Moreover, once this impression was formed, they used it as a basis for later judgments of not this particular attribute but the defendant's guilt as well. Thus, the defendant's ethnicity had little effect on either type of judgment. In contrast, participants who anticipated making a complex (guilt) judgment, which presumably required integration of several pieces of information, based their impression on the stereotype-related implications of the defendant's name. This impression, once formed, also influenced both of the judgments they were later asked to make; they rated "Carlos Ramirez" as both more hostile and more likely to be guilty than "Robert Johnson." In other words, the critical factor underlying the use of the stereotype was not the judgment that participants actually made. Rather, the complexity of the judgment that participants anticipated having to make influenced their processing of the information at the time they first received it, and the mental representation that resulted from this processing was later used as a basis for respondents' judgments regardless of the nature of these judgments.
Contrast Effects of Stereotypes. Although stereotypes are often used as heuristic bases for judgment, they can sometimes have the opposite effect. That is, when an individual is atypical of the group to which he or she belongs, people may use the group stereotype as a standard of comparison in evaluating the person. As a result, they may judge the individual to have less of the stereotyped attribute than they otherwise would. Thus, although mothers are typically evaluated more favorably than businessmen, an unkind mother is judged less favorably than an unkind businessman (Higgins & Rholes, 1976; Wyer, 1970). Analogously, although women may be stereotyped as less suited than men for administrative positions, a highly qualified female for such a position may be judged as more competent than a similarly qualified male (for evidence, see Biernat & Kobylynowicz, 1997). Correspondingly, although men may be seen as less suitable than women for secretarial positions, a qualified male applicant for such a position may be judged as more competent than a similarly skilled female.

Whether people use a stereotype as a standard of comparison or as a direct basis for judgments can depend on their perception of the variability of the group members with respect to the attribute being judged. Lambert and Wyer (1990), for example, found that persons who believed priests to be homogeneous with respect to morality judged a particular priest who had embezzled funds to be more immoral than a businessman who had engaged in this behavior; participants who believed priests to be heterogeneous with respect to morality judged the embezzling priest to be less immoral than the embezzling businessman. Interestingly, participants judged the priest as more likely than the businessman to have other stereotype-related attributes (e.g., kindness) regardless of their perceptions of group homogeneity. In other words, all participants relied on the group stereotype when no other relevant bases for judgment were available.

Effects of Suppressing Stereotypes on Their Later Use. Several of the preceding experiments indicate conditions in which the activation of a stereotype influences people’s use of other available information about the individual to whom the stereotype is applied. The activation of a stereotype can influence people’s reactions in still other ways. For example, when people believe that the use of a stereotype is socially undesirable, they may actually overcompensate for its potentially biasing impact. As a result, the stereotype can have the opposite effect than it would otherwise have. In a study by Sherman and Gorkin (1980), for example, male participants were asked to explain the following situation: A father and his son are out driving. They are involved in an accident. The father is killed, and the son is in critical condition. The son is rushed to the hospital and prepared for the operation. The doctor comes in, sees the patient, and exclaims, “I can’t operate; it’s my son.”

Only 18% of the participants identified the possibility that the surgeon was the boy’s mother. Later, in an ostensibly unrelated experiment, participants were asked to estimate the amount of compensation that should be awarded to a woman in a fair employment case. Participants awarded more compensation to the woman if they had failed to solve the problem than if they had not. Calling participants’ attention to the fact that they might have a negative stereotype of women apparently led them to overcompensate to convince themselves (and perhaps others) that this was not the case.

Sherman and Gorkin’s findings suggest that persons may consciously attempt to avoid the use of stereotypes in making judgments, but such attempts can sometimes have a rebound effect, increasing the use of stereotypes in later situations. As Wegner
(1994) pointed out more generally, one cannot actively attempt to suppress an idea without thinking about the idea being suppressed. To this extent, trying not to think about a stereotype may actually increase its accessibility in memory and therefore might increase the likelihood of using it later, once conscious efforts to suppress it are no longer made. In a series of studies by Macrae, Bodenhausen, and their colleagues (Macrae, Bodenhausen, Milne, & Jetten, 1994), participants were asked to describe the personality of a person on the basis of a picture that identified him as a skinhead. Some participants were told to avoid using a stereotype in generating the description, but others were not. The former participants were more likely than the latter to apply the stereotype to a second skinhead and also more inclined to avoid sitting by a person who ostensibly belonged to the stereotyped group. A second study (Macrae, Bodenhausen, & Milne, 1998) demonstrated similar effects under conditions in which participants were not explicitly told to suppress the stereotype but were exposed to conditions that increased their self-consciousness (and therefore their desire to avoid appearing biased). Thus, these studies suggest that inducing persons to avoid the use of stereotypes in responding to information about a person is short lived and might actually increase the use of stereotypes in the long run.

Caution should be taken in assuming that people always attempt to suppress the use of stereotypes in making judgments when they believe they might be seen as biased. This may only be true when they do not have the opportunity to justify their use of these stereotypes to the individuals who are likely to be aware of this bias. In a study by Lambert, Cronen, Chasteen, and Lickel (1996), participants were asked to form an impression of an African American. Participants with negative attitudes toward African Americans reported generally unfavorable evaluations of the target; however, their judgments were more polarized when they expected to discuss their impressions with others than when they did not. These participants apparently engaged in anticipatory bolstering of their stereotype-based judgments in preparation for the group discussion and, having done so, were more willing to report extreme judgments than they otherwise would have been.

**Influences of Stereotypes on the Interpretation of Information.** To the extent that a stereotype is composed of trait and behavioral concepts, activation of the stereotype should make these concepts accessible in memory. To this extent, the concepts are more likely to be used to interpret new information to which they are applicable. For example, Sagar and Schofield (1980) found that behaviors were interpreted as more aggressive when they were attributed to an African American than when they were attributed to a Caucasian. On the other hand, stereotypes can also be used as standards of comparison in evaluating the implications of a message, producing a contrast effect on its interpretation. For example, assertive behaviors may be interpreted as more assertive if they are performed by a woman than if they are performed by a man (Biermat, Manis, & Nelson, 1991).

The occurrence of these apparently contradictory effects may depend on the ambiguity of the information to be interpreted and therefore the extent to which stereotype-activated traits can be meaningfully applied to them. In a study described earlier, Herr (1986) found that exposing persons to stimuli that exemplified moderate levels of hostility increased their tendency to interpret a target's ambiguous behaviors as hostile; exposing persons to exemplars of extreme hostility decreased this tendency. Thus, when the activated concepts were so extreme that they could not be used to interpret the target's behaviors, they were used as standards of comparison instead. Similar effects might underlie the use of stereotypes.
A further implication of Herr's (1986) research is that the concepts activated by a stereotype can influence the interpretation of information even when the information does not pertain to a member of the stereotyped group. Moreover, this influence can occur without awareness. In a study by Devine (1989), some participants were subliminally exposed to nouns and adjectives associated with African Americans as part of a perceptual task. Later, as part of an ostensibly unrelated experiment, they read about a nondescript person's behaviors that were ambiguous with respect to hostility (a trait that was stereotypic of African American men). These recipients interpreted the behaviors as more hostile, and judged the target as more hostile, than recipients who had not been exposed to the priming stimuli. Moreover, these effects are likely to increase with recipients' prejudice toward the stereotyped group (Lepore & Brown, 1987, but see Devine, 1989, for an alternative conclusion).

It is worth noting in passing that the concepts activated by a stereotype can influence not only persons' interpretations of others' behavior but also their own behavior. Bargh, Chen, and Burrows (1996, Experiment 2) found that activating a stereotype of the elderly led college students to walk more slowly after leaving the experiment. Moreover, subliminally exposing participants to African American faces led them to express more irritation in response to an experimenter's request to perform a boring task (Bargh et al., 1996, Experiment 3). In a similar vein, stimulating participants to think about either university professors or soccer hooligans in an ostensibly unrelated experiment can stimulate them to perform either well or poorly, respectively, in a game of Trivial Pursuit (Dijksterhuis & van Knippenberg, 1998). Aside from its intrinsic interest, this research indicates that aspects of a message of which one is unaware can affect one's later judgments and behavior.

**The Impact of Affective Reactions on Message Reception and Impression Formation**

Recipients of information about a person may not base their impressions of the individual on the substantive implications of the information itself but use the affective reactions that the information elicits. For example, descriptions of an individual's behavior or physical appearance can induce positive or negative affect, and these feelings can provide the basis for judging the person independently of the descriptive implications of the information. This possibility, which was first recognized by Clore and Byrne (1974), was elaborated by Schwarz and Clore (1983, 1988) in conceptualizing the use of affect as information. These authors demonstrated in a number of studies (for reviews, see Clore, Schwarz, & Conway, 1994; Schwarz & Clore, 1996) that the affect people experience for reasons that are quite irrelevant to the target person or object they are judging can become confused with the affect elicited by information about the target and therefore can influence their evaluation of the target.

**Affect and Interpersonal Attraction.** The importance of Schwarz and Clore's research in the present context derives primarily from its implications that people often use their affective reactions per se as a basis for their evaluations of a person. When people are both motivated and able to think extensively about the information they receive about a person, they may use their affective reactions to specific details of this information to evaluate the individual. When this motivation or ability does not exist, however, recipients may base their evaluations on a more global assessment of their feelings toward the person. In these latter conditions, extraneous sources of affect can also have an influence. Thus, recipients of information about a person may evaluate the person less favorably when they are in unpleasant physical surroundings than
when they are not (Griffitt & Veitch, 1971) and less favorably if a task they recently
performed has made them feel unhappy than if it has made them feel happy (Gouaux,
1971; see Clore & Byrne, 1974, for additional evidence bearing on these effects).

Affect, Image, and Political Judgment. The impact of affect on judgments may be
particularly important in the political arena, where voters' reactions to a political can-
didate can be influenced by the "image" of the candidate as well as by the candidate's
positions on specific issues (e.g., Abelson, Kinder, Peters, & Fiske, 1980; for reviews,
see Iyengar & Ottati, 1994; Ottati & Wyer, 1993). That is, factors that stimulate positive
or negative feelings for reasons that have little to do with a candidate's qualifications
for office may have a major impact on impressions of the candidate and ultimately
voting decisions. The best known example of this is the 1960 Kennedy–Nixon deb-
bates, the impact of which was determined to a greater extent by differences in
the candidates' nonverbal mannerisms and demeanor than by things the candidates
actually said.

The effects of image-eliciting information and more substantively relevant in-
formation may not be independent, however. In a study by Wyer et al. (1991),
onacademic university employees watched a videotaped nonpolitical speech by
a politician whose speech style and nonverbal behaviors conveyed either a favor-
able or an unfavorable image. Then, either immediately or 1 day later, they lis-
tened to an audio-taped newscast describing the politician's stands on a number
of social issues, the majority of which were either liberal or conservative. People
who had viewed the image-eliciting tape 24-hours earlier based their evaluations
of the candidate on their agreement with his issue stands; however, making the
candidate's image salient at the time his issue stands were revealed decreased the
effects of agreement with his stands on specific issues and correspondingly increased
the impact of more general, ideological implications of these stands. The vide-
tape of the candidate's speech was not directly relevant to either the candidate's
political orientation or his stands on specific policies. It nevertheless influenced
the way in which recipients thought about the candidate's issue positions, leading
them to apply broader, ideological criteria rather than construing the implications
of each stand individually. It seems reasonable to suppose that the image-evoking
videotape elicited positive or negative affective reactions to the candidate. To this
extent, the salience of these reactions may have been the major contributor to the
processing differences that occurred, rather than the politician's image per se.

General Implications

As the research described in this section clearly indicates, both stereotypes and affer-
tive reactions can influence the impact of messages that people receive about
a person or object. Moreover, the nature of this influence can vary. For example,
stereotypes not only can decrease the use of other available information, but can
influence the way this information is interpreted. Affective reactions, elicited by ei-
ther the information presented or external sources, can have similar effects. As we
noted earlier, the use of these sources of information is not necessarily inappro-
piate. If stereotype-related attributes are objectively associated with members of the
stereotyped group, it would be as irrational to ignore them entirely (Locksley et al.,
1982). Moreover, as Wyer et al. (1999) pointed out, many judgments of liking for a
person or object are inherently judgments of one's feelings toward the referent, and
it would be inappropriate to exclude these feelings from consideration. The problem
confronting message recipients is not whether to consider or ignore their feelings toward the person they are judging, but how to assess the implications of their feelings accurately in the context of other available information.

In fact, this assessment is difficult. As studies by Sherman and Gorkin (1980) and others have pointed out, people who are made aware of their use of a stereotype may often overcompensate, leading the stereotype to have negative impact. Overcompensation in the use of affect can occur as well (Isbell & Wyer, 1999; Ottati & Isbell, 1996). In Ottati and Isbell's (1996) studies, for example, participants evaluated a politician on the basis of information about his stands on a number of social issues. Before receiving the information, however, participants were induced to feel either happy or unhappy for reasons that were irrelevant to the judgment to be made (e.g., good or bad performance on an examination). Participants with little political expertise judged the politician more favorably if they were feeling happy than if they were not; participants who were experts in the area judged the politician relatively less favorably when they were happy. Conceivably both novices and experts attempted to adjust their judgments to compensate for the extraneous feelings they were experiencing, but novices perceived themselves to be relatively unbiased by these feelings, and so they did not adjust enough. Experts, however, overadjusted, producing a contrast effect of the affect they were experiencing on their judgments.

Responses to Communications in a Low-Involvement Medium: The Impact of Television on Attitudes, Values, and Perceptions of Social Reality

As the preceding discussion indicates, recipients often do not respond passively to a message that concerns an issue they consider to be important. Many messages concern issues, persons and objects in which recipients have little if any immediate interest, however. In these cases, recipients may have little motivation to think carefully about the content of the messages even if they are able to do so. A major source of such messages is television. Americans watch television an average of more than 4 hours a day (Nielsen, 1995). Moreover, they often do this for no particular reason other than to be entertained or to escape from more pressing cognitive demands. (For a comprehensive review of the uses and gratifications that derive from television and the mass media more generally, see Rubin, 1994.) Consequently, they are rather passive information processors.

The messages conveyed on television differ from those considered in the previous section in several important respects. For one thing, they consist of a complex of visual and verbal information that is transmitted in a short period of time, at a rate that recipients cannot control. Consequently, recipients are often unable to think carefully about the implications of the information even if they were motivated to do so, and so television may be a particularly effective medium for persuasion.3

For these reasons, the impact of information conveyed on television may be largely a function of recipients' ability to comprehend it rather than their tendency to refute its implications. Two aspects of this information are worth noting in this context. First, although the information is transmitted in a complex audio-visual format, this

3This possibility is recognized in Ray Bradbury's (1953) novel, Fahrenheit 451, in which all reading materials were being destroyed by a totalitarian regime and only television was allowed. This was because recipients could control the rate of information input from books and newspapers and therefore more easily refute its validity. Although Bradbury's account is fictional, his basic premise seems likely to have some basis in reality.
format is similar to that in which people receive information in the course of daily life experience and therefore may be easy to comprehend (cf. Adaval & Wyer, 1998). At the same time, the features of events encountered on television are often similar to those encountered in daily life. Consequently, once the events seen on television are stored in memory, they are often difficult to distinguish from actual experiences one has had or learned about from other sources. As a result, the information acquired on television can have an impact on beliefs, attitudes, and perceptions of social reality that is similar to the impact of actual life experiences and, moreover, may do so without awareness. This may be true even though the information conveyed on television concerns persons and situations that are clearly fictitious.

We consider these possibilities in the discussion that follows. First, we discuss briefly the effects of messages that are conveyed both visually and linguistically under conditions in which recipients are unmotivated to think carefully about their implications. We then turn to a discussion of the impact of television on recipients’ perceptions of social reality and the beliefs and attitudes that these perceptions are likely to influence. Although our discussion focuses largely on the impact of messages that are conveyed on television, the processes underlying this impact may operate more generally.

Effects of Visual Information

The communications conveyed on television are distinguished by their strong visual component. As discussed earlier in this chapter, visual information is more memorable than verbal information, and so its impact may increase over time relative to information that is conveyed only verbally. Correspondingly, information that elicits visual images of events that occur in a particular situation may have more impact than abstract, consensus information, the implications of which are difficult to imagine (Nisbett & Borgida, 1975; Nisbett & Ross, 1980; but see Zuckerman, 1978, for qualifications on this conclusion). This suggests that communications are more likely to have an impact if they provide concrete examples of an event or situation than if they consist of abstract summary descriptions, even if the latter are objectively more reliable.

In the domain of advertising, however, the influence of visually conveyed information is not completely clear. The effect of pictures on the processing of verbal information has been investigated in several studies (Adaval & Wyer, 1998; Childers & Houston, 1984; Costley & Brucks, 1992; Edell & Staelin, 1983; Miniard, Bhatia, Lord, Dickson, & Unnava, 1991). In general, this research shows that accompanying verbal descriptions of a product by pictures increases evaluations of the product only if recipients have little a priori interest in the information and its implications (Miniard et al., 1991) or, alternatively, the information is conveyed in the form of a narrative (Adaval & Wyer, 1998). In this research, however, the visual information consisted of a set of pictures accompanied by written descriptions of the objects involved. Thus, their implications for the effects of visual information of the sort conveyed on television are hard to evaluate.

The Role of Symbolic Meaning in Communication and Persuasion

We have already discussed many of the factors that influence the interpretation of information, but several additional issues arise that are particularly important in understanding communication processes in low-involvement situations. These
considerations arise from the fact that the meaning of a message may not only be literal but also symbolic. The American flag, for example, may symbolize patriotism, and the color white may symbolize purity. Such symbols can often be used to convey abstract concepts and ideas that would otherwise be difficult and cumbersome to communicate. The use of symbols for this purpose is documented not only in television (Hirschman, 1988) but also in films (Holbrook & Grayson, 1986), comic books (Belk, 1987), and advertising (Belk & Pollay, 1985; see also Moeran, 1984). The transmission of these “hidden” messages obviously requires that the recipient attach the same symbolic meaning to pictures and objects that the communicator does. The meaning of a symbol may be assigned spontaneously at the time it is encountered, however, and its effects might therefore occur without conscious awareness (Bargh, 1997). It is interesting to speculate that the use of symbols by a communicator may often occur without awareness as well.

The use of symbols to convey more abstract meaning has a parallel in the use of metaphors. In science, the communication of complex ideas through metaphors is commonplace. For example, insight into the way information is represented in the mind can be gained by likening the human information processing system to that of a computer (Anderson, 1983; Wyer & Snell, 1989) or to a neurological network (Collins & Loftus, 1975). Although these metaphors are recognized as invalid by both communicators and recipients, they are useful heuristic devices that generate empirically testable predictions.

Metaphors are also common in persuasive communications (Mio, 1996; Ottati, Rhoads, & Graesser, 1999; Read, Cesa, Jones, & Collins, 1990). In this case, however, their influence may be largely unconscious (Lakoff, 1987; Lakoff & Johnson, 1980). Thus, we spontaneously understand the meaning of someone’s statement that “love is a battlefield” or that “love stinks” but also the observation that “love is a warm puppy.” In the advertising domain, suggestions that soap powders are “liberators” that “force out” or “attack” dirt, and that cold remedies “fight” bacteria, are also understood with ease. These “war” metaphors may be effective in part because they convey impressions of aggressiveness in the service of combating a despised opponent (Barthes, 1972). Graesser, Mio, and Milis (1987) also recognized that the power of metaphors results in part from their ability to evoke spontaneous visual images, thus conveying more concretely concepts that are difficult to get across in literal terms.

The power of metaphors also derives from the fact that their meaning often extends beyond the object or event to which they are applied. In some cases, these extensions can be misleading or inappropriate. As noted in describing Bransford et al.’s (1972) research, a single cue (e.g., “parachute”) can activate a large body of knowledge that can give meaning to an otherwise anomalous statement (“i.e., “The haystack was important because the cloth would rip”). Similarly, likening a foreign ruler to Adolf Hitler might elicit images of the Holocaust, and of attempts to conquer the world, that go far beyond the individual to whom the metaphor is applied.

Metaphors may often be applied automatically in the course of comprehending information. An understanding of their influence is therefore particularly important in low-involvement media, for which individuals are unlikely to engage in the cognitive activity that is necessary to assess their appropriateness. Metaphors can also influence the attention paid to other available information. This latter influence, however, may depend on recipients’ attitudes toward the metaphor.

This contingency was demonstrated by Ottati et al. (1999). College students were exposed to persuasive communications that contained either strong or weak arguments in support of a senior thesis requirement. Phrases were inserted into the
message that in some conditions employed a sports metaphor (e.g., "If students want to play ball with the best, . . .") and in other conditions did not ("If students want to work with the best, . . ."). The impact of the message on recipients who had favorable attitudes toward sports was more strongly affected by the strength of the arguments contained in it when these arguments were embedded in a sports metaphor. In contrast, the effects of argument strength on reactions by recipients with negative attitudes toward sports did not depend on the introduction of a metaphor. Although this study was not conducted in a low-involvement situation, it seems likely to have implications in these situations as well.

**Influences of Television on Perceptions of Social Reality**

To reiterate, the information that is conveyed on television is likely to be processed with minimal cognitive elaboration. Moreover, this information, like that acquired in other media, often becomes dissociated from its source. Consequently, the information is likely to become confused with knowledge acquired through other sources. This becomes particularly important in light of the fact that much of the television people watch deals with fictitious persons and situations. To this extent, television may bias both people's perceptions of reality and the beliefs and attitudes that they base on these perceptions.

The tendency for viewers to integrate the information they receive on television into their perceptions of real-world phenomena is referred to more formally as a "cultivation" effect (Gerber, Gross, Morgan, & Signorile, 1994; Morgan & Shanahan, 1997). Instances of crime and violence, affluence, marital conflict, and selected occupations (doctors, lawyers, policemen, etc.) are overly represented on television relative to their incidence in the real world (Gerber et al., 1994; Lichter, Lichter, & Rothman, 1994). Consequently, persons who watch television regularly are likely to have these instances easily accessible in memory and therefore are likely to use them as a basis for their judgments for reasons noted earlier in this chapter (see also Tversky & Kahneman, 1973). As a result, they typically estimate these objects and events to be much more common than they actually are.

Although a review of 20 years of research on cultivation effects suggests that these effects are not large in magnitude (Morgan & Shanahan, 1997), they are nevertheless of both practical and theoretical importance. Shrum (1995, 1996) and his colleagues (O'Guinn & Shrum, 1997; Shrum, Wyer, & O'Guinn, 1998) have further documented the phenomenon and the reasons for its occurrence. That is, heavy television viewers make higher estimates of events that are shown frequently on television than do light viewers. For example, they are relatively more inclined to overestimate not only the incidence of violent crimes, prostitution, and alcohol addiction (Gerber, Gross, Morgan, & Signorile, 1980; Shrum, 1996; Shrum & O'Guinn, 1993) but also the likelihood of owning expensive products (O'Guinn & Shrum, 1997). Moreover, they make these judgments more quickly than light viewers do (Shrum, 1996), confirming the assumption that the information people acquire on television and use as a basis for their judgments is easily accessible in memory.

Considered in isolation, the relation between television viewing and perceptions of social reality might be subject to alternative interpretations. (For example, heavy television viewers might be more likely to live in areas where crime is a common occurrence and overestimate its incidence for this reason.) A meta-analysis conducted by Morgan and Shanahan (1989) calls many of these interpretations into question, however. The causal influence of television viewing on judgments was established
by Shrum et al. (1998), who showed that the relation between television viewing and perceptions of reality remains even when variables that might account for the relation (socioeconomic status, education level, etc.) are controlled. On the other hand, calling people's attention to the potentially biasing effect of television leads them to discount television-based exemplars and therefore decreases the magnitude of this effect. The latter finding suggests that cultivation effects typically occur without awareness.

Illusory Correlations. Although evidence in support of a cultivation effect is substantial, it could sometimes be offset by a tendency for individuals to overestimate the likelihood of infrequently occurring events. In a study by Hamilton and Gifford (1976), for example, participants were exposed to information about individuals who belonged to two groups. The number of members of each group varied but the proportion of members who were described as performing a certain behavior was the same; however, participants later estimated this proportion to be greater when the group was small than when it was large. By analogy, suppose the proportion of African Americans versus the proportion of European Americans who commit crimes are actually the same. Nevertheless, because fewer residents of the United States are African American than European American, people may overestimate the proportion of African Americans who commit crimes relative to the proportion of European Americans who do so.

Although Hamilton and Gifford's (1976) research was conducted in the laboratory, it has clear implications for the effects of the media on perceptions of reality. These effects could occur over and above the cultivation effects identified by Shrum and others. For example, suppose African Americans were less frequently depicted as criminals on television than European Americans were. Hamilton and Gifford's findings suggest that viewers might still perceive them as proportionately more likely than European Americans to engage in criminal activity.

Effects on General Attitudes, Beliefs, and Values. To the extent that television influences people's perceptions of social reality, it is likely to influence more general beliefs, attitudes, and values that are based on these perceptions. This is in fact the case. For example, heavy viewers not only overestimate the incidence of doctors in American society but also report greater faith in the ability of doctors to cure disease (Volgy & Schwarz, 1980). Similarly, they not only overestimate the incidence of crime and violence but perceive themselves to be in relatively greater danger (Gerbner et al., 1980) and exhibit greater fear and anxiety (Bryant, Carveth, & Brown, 1981).

The influence of the media on general beliefs and values was more formally recognized by Marchand (1985), who identified at least four general beliefs that were implicit in an analysis of print ads:

1. First impressions are important in acquiring popularity and social success.
2. People, regardless of their social status, have equal access to both the benefits of

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3 This anxiety may be partially offset by a tendency for people who are frequently exposed to criminal activity to become desensitized to its seriousness. Zillman (1989), for example, showed experimentally that exposing volunteer participants to sadomasochistic pornography over a period of several weeks increased their tolerance for rape—an effect that persisted over a period of several months. (For other evidence of the impact of pornography on the trivialization of rape, see Malamuth & Donnerstein, 1982; Zillman, 1983).
society and to its dangers. (Thus, for example, everyone can potentially have a beautiful figure. At the same time, everyone is potentially afflicted with halitosis.)

3. The past, in which people were closer to nature, is superior to the soft, artificial quality of the present.

4. Left to their own ends, children often choose the wrong things and parents have the responsibility to guide their tastes.

To the extent the content of television programs, like that of print ads, frequently exemplifies these general propositions, it is likely to be incorporated into viewers' perceptions of social reality. Thus, they attain the status of social clichés, or implicit "theories" (Ross, 1969) that, once acquired, can be used as a basis for evaluating new information to which they apply. To this extent, advertisements and commercials that implicitly or explicitly illustrate them may be effective. For example, persons who have acquired the theory that first impressions are important for social success may be more vulnerable to advertisements for products that are described as improving one's personal appearance (e.g., a toothpaste that gives people "that winning smile"). Similarly, persons who have acquired the theory that getting back to nature is important might be more vulnerable not only to advertisements for natural food products but also, somewhat ironically, to smoking advertisements that feature the Marlboro man. (For an interesting analysis of the implications of implicit theories about men's and women's use of the telephone on the choice of strategies to promote telephone use, see Alexander, Burt, & Collinson, 1995.)

It should nevertheless be noted that the impact of television on perceptions of social reality is not always undesirable. Television programs that consistently associate certain types of individuals with a particular social or vocational role could of course create an implicit theory that only individuals of this type are qualified to fulfill this role. On the other hand, portraying members of a social category in roles to which they have traditionally been excluded can be instrumental in decreasing social stereotypes. Thus, for example, portraying women as airplane pilots, and African Americans as business executives, can gradually eliminate stereotype-based beliefs that members of these groups are unsuitable for these positions.

SUMMARY AND CONCLUSIONS

As we have emphasized throughout this chapter, the ability to understand and evaluate the literal implications of the messages conveyed in a social context does not guarantee that these messages will be interpreted correctly. In describing the general processes that underlie the comprehension of a message's literal implications, for example, we pointed out that recipients are often unaware of the factors that lead them to use one set of concepts to interpret a message rather than another. As a result, the particular concepts they apply can be influenced by experiences that have occurred frequently or recently in the past but are quite unrelated to the issues of concern in the message itself. Message reception skills per se may have little influence on these processes.

When recipients are aware that their interpretation of a message might be influenced by extraneous factors that are irrelevant to its referent, they may attempt to adjust for the influence of these factors. Message recipients may differ in their sensitivity to the possibility of bias and therefore in the likelihood of adjusting for it. Even when recipients are conscious of the possibility of bias, they may find it difficult if
not impossible to determine the amount they should adjust their responses to compensate for its influence. In fact, recipients with substantial knowledge about the topic at hand often appear to overcompensate for the biasing influence of irrelevant experiences. As a result, these experiences have a negative impact on their reactions to the messages they receive.

Recipients' general knowledge about a topic can help them to determine the extent to which the statements pertaining to this topic are true or false and therefore may increase their sensitivity to the possibility that the statements' literal meaning is not the meaning the speaker intended to convey. An accurate assessment of a communicator's intentions often requires inferences about the communicator's own knowledge about the topic and attitude toward the message's referent, as well as the communicator's objectives. These inferences can depend greatly on the situation in which the message is received and the recipient's personal relationship with the source. Consequently, skills and knowledge that allow message recipients to assess the implications of a message accurately in one situation may not generalize to other situations. When a message is composed of several parts, the processes that underlie the extraction of meaning from it can depend on both its modality and its format (e.g., whether it is conveyed in the form of a narrative or in a list of temporally unrelated pieces of information). Message reception skills are likely to depend on the process that is invoked.

The interplay of message reception and transmission is particularly evident in answering questions. In informal conversations, respondents to a question may desire not only to provide the information requested but also to facilitate the interaction. To attain these objectives, they must be able to respond in a way that makes it easy for the questioner to react to this response. But even when questioners and respondents do not directly interact, respondents' ability to provide information depends on their ability to determine what it is that the questioner wants to know and how their answers will be interpreted.

In many situations, a communicator's objective may be to persuade the recipients to adopt a certain attitude or behavior. Recipients' responses to such a message depend on their recognition of these intentions. It may also depend on recipients' previously formed beliefs and opinions about the position being advocated. When messages are counterattitudinal, recipients' ability to resist being influenced can vary not only with their knowledge about the topic but also with the extent to which they have had previous opportunities to "practice" refuting arguments against the position advocated. However, the way in which recipients' ability to comprehend and counterargue a persuasive message influences its impact can depend on characteristics of the message itself. For example, these abilities may decrease the impact of a message that is easy both to understand and to refute, but they may increase the influence of a message that is difficult to comprehend but contains strong arguments.

On the other hand, people are often not motivated to engage in the cognitive activity required to refute the validity of information they receive, regardless of their knowledge and ability to do so. Information transmitted on television, for example, which recipients often acquire for the purpose of being entertained, may often be comprehended and stored in memory without taking into account the validity of its implications. Later, the information may be retrieved out of context and used as a basis for inferences about one's world and for attitudes and values to which the perceptions are relevant.

In summary, the general conclusion that message reception depends on both the motivation and the ability to comprehend the literal and pragmatic aspects of a
message seems self-evident, but the way in which these factors combine to influence message reception in specific situations is much less so. As we noted at the outset, the reception of a message is inevitably imperfect regardless of the ability and motivation to comprehend and evaluate its implications. On the other hand, these imperfections can often be beneficial. The fact that communications are ambiguous may often permit them to be interpreted in a way that avoids controversy and therefore may preserve harmony between the communicating parties. This suggests that even if it were possible to impart skills that would permit complete understanding of one another's messages, the desirability of doing so is open to question. A discussion of this question is, perhaps fortunately, beyond the scope of this chapter.

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