CHAPTER 8

Theories of Persuasion

One of the most basic forms of communication is persuasion. **Persuasion** has been defined as "attitude change resulting from exposure to information from others" (Olson and Zanna, 1993, p. 135). A great deal of research has been conducted dealing with communication aimed at changing attitudes.

Attitudes are basically our predispositions toward things. An attitude refers to whether or not we like something. The following are examples of attitudes: A man prefers one presidential candidate over another. A woman is opposed to abortion. A teenager likes the music of rock group U2. Attitudes are important because they influence actions. People's behaviors are often determined by their attitudes. A man who has a favorable attitude toward a candidate is likely to vote for that candidate. A woman who opposes abortion is not likely to get an abortion. A young person who likes U2 will probably buy the group's records.

Another concept that is closely related to attitudes is **beliefs,** or the statements that people assume to be true. A man who believes that smoking is likely to cause lung cancer may avoid smoking. A person who believes that members of a certain racial group are less intelligent may treat those people differently.

Attitudes are important in many areas that people are very concerned about, including health practices (for instance, AIDS prevention, avoiding heart attacks, stopping or preventing smoking, and promoting responsible use of alcohol), prejudice and stereotyping, and political attitudes.

Attitudes are often thought of as having three components: an **affective component**—liking or feeling about an object; a **cognitive component**—beliefs about an object; and a **behavioral component**—actions toward the object. Essentially, an attitude is a summary of the evaluation of the object toward which the attitude is held. This summary evaluation of being favorable or unfavorable toward the attitude object lies at the core of the attitude. The three components of the attitude are different manifestations of that core evaluation (see Box 8.1).

The structure of attitudes can also be important. It is useful to look at two kinds of attitudinal structure: interattitudinal and intra-attitudinal. **Interattitudinal structure** refers to the clustering together of attitudes in groups or sets. For instance, a group of attitudes can cluster together to form an ideology. For conservatives, such a cluster might be made up of an unfavorable attitude toward big government, opposition to welfare spending, and belief that the individual succeeds by his or her own efforts.

Box 8.1 The Three-Component Model of Attitudes

It is sometimes useful to think of attitudes as having three components—an affective component, a cognitive component, and a behavioral component. The affective component consists of feelings toward the attitude object. The cognitive component consists of beliefs about the attitude object. The behavioral component consists of behaviors or intended behaviors toward the attitude object.

For example, imagine a student who had a favorable attitude toward pop star Madonna. The three components could show up in the following ways:

1. *Affective*—liking Madonna, feeling excitement about seeing Madonna.
2. *Cognitive*—believing Madonna is a good singer and dancer, believing she is a good role model for young women.
3. *Behavioral*—buying Madonna music CDs, attending Madonna concerts, going to movies in which Madonna appears.

Intra-attitudinal structure refers to the way components of an attitude relate to one another. For instance, are the three components of attitude—affective, cognitive and behavioral—consistent with one another? Sometimes, if the components of an attitude are not consistent with one another, pressure is generated for one of them to change (see Chapter 7). But in some cases an individual can hold an ambivalent attitude made up of favorable and unfavorable components toward the same object.

Many attitudes are difficult to change. Attitudes usually have value and utility for the person who holds them, and they are often tied to a person's ego or sense of identity. Often attempts to change a person's attitudes are seen as a threat and are met with resistance.

THE CONCEPT OF ATTITUDE

The concept of **attitude** has been described by psychologist Gordon Allport (1954) as "probably the most distinctive and indispensable in contemporary American social psychology" (p. 43). Allport points out that the term came to replace in psychology such vague terms as *instinct, custom, social force,* and *sentiment.*

Some useful definitions of attitude include the following:

- *Attitude* is primarily a way of being "set" toward or against certain things (Murphy, Murphy, and Newcomb, 1937, p. 889).
- A mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's responses to all objects and situations with which it is related (Allport, 1954, p. 45).
- An enduring, learned predisposition to behave in a consistent way toward a given class of objects (English and English, 1958, p. 50).
- An enduring system of positive or negative evaluations, emotional feelings, and pro or con action tendencies with respect to a social object (Krech, Crutchfield, and Ballachey, 1962, p. 177).

HISTORY OF ATTITUDE-CHANGE RESEARCH

For centuries, people must have operated on the basis of intuition and common sense in their attempts to persuade. Aristotle was one of the first to analyze and write about persuasion in his classic works on rhetoric. Years later, particularly when mass communication became more widespread, people began to study persuasion even more systematically. The Institute for Propaganda Analysis, with its identification of seven techniques of propaganda, was doing some of this early work (see Chapter 6).

A study sometimes cited as the first attitude-change study was an investigation by Rice and Willey of the effects of William Jennings Bryan's address on evolution at Dartmouth College in 1923 (described in Chen, 1933). A group of 175 students indicated their acceptance or rejection of evolution on a five-point scale. The students were asked to give their attitudes after hearing the speech, and, from retrospection, their attitudes before hearing the speech. They found that more than one-quarter of the students showed substantial change in attitude, but the use of the retrospective report makes the finding highly questionable.

A major program of research dealing with attitude change was carried out by psychologist Carl Hovland and his associates in the 1940s and 1950s. Hovland began his research on attitude change while working for the U.S. Army during World War II. Hovland led a team of social scientists working for the Research Branch of the U.S. Army's Information and Education Division. This work was so original and influential that it has been called "the most important fountainhead of contemporary research on attitude change" (Insko, 1967, p. 1). The Hovland work was based on controlled experiments in which variables were carefully manipulated in order to observe their effects. After the war, Hovland continued his research on attitude change in what has come to be called the The Yale Communication and Attitude-Change Program.

Hovland's approach to attitude change was essentially a **learning theory** or reinforcement theory approach. He believed that attitudes were learned and that they were changed through the same processes that occurred when learning took place. Hovland had studied and worked at Yale with Clark Hull, whose theory was probably the most influential theory of learning between 1930 and 1950 (Hilgard and Bower, 1966).

Hovland was an extremely creative researcher who borrowed ideas from many different theories. His work on attitude change exemplifies the **convergent style of research,** in which researchers "bring a variety of theories convergently to bear on the relation of interest" (McGuire, 1996, p. 52). Hovland was known for quizzing his colleagues thoroughly on topics they were familiar with that he was not. One associate said every time he talked to Hovland he came away feeling "like a squeezed orange" (p. 48).

During World War II, the U.S. Army began using films and other forms of mass communication on an unprecedented scale. Most of this material was used in the training and motivation of U.S. soldiers. The Experimental Section of the Research Branch of the War Department's Information and Education Division was given the task of evaluating the effectiveness of these materials. The section

did two basic types of research: (1) evaluation studies of existing films and (2) experimental studies in which two different versions of the same film (or message) were compared. The section had to do much of the first type of research because it suited the practical purposes of the Army. The researchers felt, however, that the second type of research was actually more useful because it could lead to general principles of attitude change. These experimental studies, in which certain variables were manipulated, really constituted the beginning of attitude-change research. But, the evaluation studies of existing films also made some useful contributions to communication theory.

One of the first tasks the section took on was to evaluate the first four films of a series of films called *Why We Fight.* This series was produced by Frank Capra, the Academy Award-winning director of *It Happened One Night* (1934), *Mr. Deeds Goes to Town* (1936), and *You Can't Take It with You* (1938). The *Why We Fight* films were designed as motivational films to be used in the training and orientation of American soldiers. They were based on the assumptions that many draftees did not know the national and international events that led to America's entrance into World War II and that a knowledge of these events would lead men to accept more easily the transition from civilian life to that of a soldier.

One of the films studied in great detail was *The Battle of Britain,* a 50-minute film designed to instill greater confidence in America's British allies (Hovland, Lumsdaine, and Sheffield, 1949). Hovland and his associates designed research to determine the film's impact in three main areas: specific factual knowledge gained from the film, specific opinions concerning the Battle of Britain, and acceptance of the military role and willingness to fight. The research procedure was simply to have an experimental group that saw the film and a control group that did not, and then one week later to give both groups a questionnaire that appeared unrelated but measured knowledge and opinions on subjects related to the film. These Army studies were conducted with military units and therefore ended up with large sample sizes; the *Battle of Britain* study involved 2100 people.

The results showed that the film was quite effective in conveying factual information about the air war over Britain in 1940, that it was somewhat effective in changing specific opinions about the conduct of the air war, and that it had essentially no effect at all on motivation to serve or in building increased resentment of the enemy. Thus, the film failed in its ultimate objective, increasing soldiers' motivations. Similar results showed up for the other *Why We Fight* films studied.

This research on the *Why We Fight* series became part of the growing body of evidence indicating that a single mass communication message is unlikely to change strongly held attitudes. Similar evidence comes from other studies as different as the Cooper and Jahoda investigation of antiprejudice cartoons (Chapter 4) and research by Lazarsfeld and his associates on political campaigns (Chapter 10).

In the decades since the Hovland work, researchers began to examine the cognitive processes underlying attitude change (Eagly, 1992). This approach tries to identify the thought processes that are involved in attitude change. Anthony Greenwald's (1968) cognitive response model, which suggests that attitude change results from receivers actively thinking about a message, is an example of this approach.

The process models led researchers to recognize that sometimes attitude change involves heavy cognitive processing by the message recipient, but sometimes it does not. This thinking led to the dual-process models of attitude change, including the elaboration likelihood model of Petty and Cacioppo (1986) and the heuristic-systematic model of Chaiken, Liberman, and Eagly (1989).

Later theories of attitude change of the 1980s and 1990s have also gotten away from the single-variable approach that was characteristic of Hovland's work. These recent theories attempt to explain attitude change as a result of a number of variables operating at once.

SPECIFIC TECHNIQUES OF ATTITUDE CHANGE

One-Sided and Two-Sided Messages

On many issues, there are arguments on both sides. Which is the better strategy—to mention only the arguments on the side you are pushing or to mention the arguments on both sides but focus on the ones on the side you are pushing? This is essentially the old question of the effectiveness of *card stacking,* one of the propaganda devices identified by the Institute for Propaganda Analysis (see Chapter 6).

One of the first experiments on *one-sided* and *two-sided messages* was carried out by Hovland and his research team as part of their research for the Army during World War II (Hovland, Lumsdaine, and Sheffield, 1949). Hovland and his associates were trying to answer this question because they faced a real communication dilemma. After the defeat of Germany in 1945, many soldiers apparently felt the war was almost over. The Army wanted to get across the idea that there was still a tough job ahead in defeating the Japanese.

The researchers realized that there were arguments for each strategy. A one-sided presentation can be defended on the basis that a two-sided presentation raises doubts in the minds of people unfamiliar with the opposing arguments. A two-sided presentation can be defended on the basis that it is more fair and that it will help prevent people who are opposed to a message from rehearsing counterarguments while being exposed to the message. A specific purpose of the study was to measure the effectiveness of the two kinds of message presentation on two kinds of audience members—those initially opposed to the message and those initially sympathetic to the message.

Two versions of a radio message were prepared. Both presented the general argument that the war would take at least two more years. The one-sided message was 15 minutes long and brought out arguments such as the size of the Japanese army and the determination of the Japanese people. The two-sided message was 19 minutes long and brought out arguments on the other side, such as the advantage of fighting only one enemy, but it focused mostly on the arguments that the war would be a long one. Looked at in general for all groups, the results indicated that both kinds of presentations produced clear opinion change in comparison with the control group, but that neither presentation was more effective than the other.

The researchers had anticipated that the two-sided presentation might work better with an audience initially opposed to the message, so they proceeded to

check out this possibility. They did this by dividing each test group into subjects initially opposed to the message and subjects initially favorable to the message. The men who had given initial estimates that the war would take $1\frac{1}{2}$ years or less were considered to be initially opposed to the message, while those who gave initial estimates of more than $1\frac{1}{2}$ years were considered to be initially favorable to the message. This examination of results according to initial attitude shows the one-sided message is most effective with persons initially favorable to the message and the two-sided message is most effective with persons initially opposed to the message. This is what the researchers had predicted. Hovland and his associates also found that a one-sided message is most effective with people of less education and the two-sided message is most effective with people of greater education.

Both additional analyses—the one by initial opinion and the one by education level—show that the kind of presentation that is most effective depends on the characteristics of the audience. These results brought out the complexity of attitude change—that variables in the message sometimes interact with other variables, such as personal characteristics of the audience. This is part of the evidence that led psychologist Roger Brown (1958), in his analysis of propaganda, to conclude that the propaganda devices are "contingently effective rather than invariably effective" (p. 306).

Source Credibility

One of the variables in a communication situation over which the communicator typically has some control is the choice of the source. And, judging from many day-to-day examples of communication campaigns, there appears to be a widespread belief that having the right source can increase the effectiveness of your message. Examples of high-credibility sources being used in campaigns include former presidential candidate Bob Dole giving testimonials for the anti-impotence drug Viagra, former *Good Morning America* cohost Joan Lunden endorsing Claritin allergy medication, and members of the U.S. women's soccer team appearing in commercials for Nike.

When you select an effective source to speak for your idea or product, you are essentially using the propaganda device of the testimonial. But the effectiveness of this technique was not really investigated by the Institute for Propaganda Analysis. Hovland and Weiss (1951) designed an experiment to test the effectiveness of source credibility. Their research was inspired by a phenomenally successful radio program involving entertainer Kate Smith. In an 18-hour program during World War II, Smith received pledges for $39 million for war bonds, an astounding figure at that time. Researchers who studied the Smith broadcast concluded that key elements in her success were her perceived *sincerity* and *trustworthiness.*

Hovland and Weiss (1951) designed an experiment in which the same messages would be presented to some people as coming from a high-credibility source and to other people as coming from a low-credibility source. This would allow them to determine the effect of the source variable alone. The experiment

was done with four messages on four different topics. Each subject received a booklet containing four articles. Each article was on a different topic. The subjects' opinions on the four topics were measured with questionnaires before getting the communication, immediately after getting it, and four weeks after getting it. Each article was presented with a high-credibility source for half the subjects and a low-credibility source for the other half. The four topics were controversial ones at the time and revolved around the following opinion questions:

1. *Should antihistamine drugs continue to be sold without a doctor's prescription?* The high-credibility source on this issue was the *New England Journal of Biology and Medicine.* The low-credibility source was identified in the research report as "a mass circulation monthly pictorial magazine."
2. *Can a practicable atomic-powered submarine be built at the present time?* The high-credibility source was J. Robert Oppenheimer, the head of the team of scientists that developed the atomic bomb. (This was before Oppenheimer's security clearance investigation, which undoubtedly damaged his credibility.) The low-credibility source was *Pravda,* the Russian newspaper.
3. *Is the steel industry to blame for the current shortage of steel?* The high-credibility source was the *Bulletin of National Resources Planning Board.* The low-credibility source was identified as an "anti-labor, anti-New Deal, 'rightist' newspaper columnist."
4. *As a result of television, will there be a decrease in the number of movie theaters in operation by 1955?* The high-credibility source was *Fortune* magazine. The low-credibility source was identified as "a woman movie-gossip columnist."

The results for the immediate aftertest show that the high-credibility source did produce more opinion change on three of the four topics. The exception was the topic of the future of movies, where the results show slightly more opinion change for the low-credibility source.

The retest of opinion after four weeks produced an unexpected finding. Results for this retest are presented in Figure 8.1 for all four topics combined. The figure shows that when the subjects were retested after four weeks, the amount of opinion change retained was approximately equal for the high-credibility and low-credibility sources. However, for the low-credibility source, there appeared to be greater opinion change after four weeks than there was immediately after receiving the communication. This was the second occurrence of what Hovland, Lumsdaine, and Sheffield (1949) had called a *sleeper effect.* Hovland and Weiss (1951) did some further research and found that this was not due to the forgetting of the source, as suggested in the earlier study, but to a tendency after the passage of time to dissociate the source and the opinion.

Much research since the Hovland and Weiss (1951) experiment has attempted to find the dimensions of source credibility. Hovland and Weiss had suggested that the dimensions of expertness and trustworthiness might be important. Many

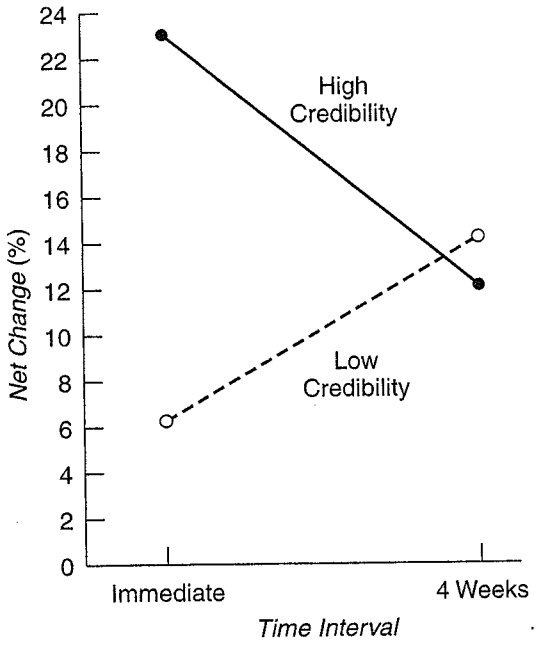

Figure 8.1 Changes in extent of agreement with high-credibility and low-credibility sources after four weeks. *Source:* From C. I. Hovland and W. Weiss. "The Influence of Source Credibility on Communication Effectiveness," *Public Opinion Quarterly* 15 (1951): 646. Copyright 1951 by Princeton University Press. Reprinted by permission of the University of Chicago Press.

of these studies used factor analysis of rating scales applied to speakers to try to find the common dimensions used in the ratings. In one of the more comprehensive of these studies, Whitehead (1968) had subjects rate two speakers on 65 semantic differential scales solely on the basis of tape-recorded introductions. Whitehead found four dominant factors: trustworthiness, professionalism or competence, dynamism, and objectivity. The **trustworthiness** factor was based on the scales *right-wrong, honest-dishonest, trustworthy-untrustworthy,* and *just-unjust.* The **professionalism or competence** factor was based on the scales *experienced-inexperienced* and *has professional manner–lacks professional manner.* The **dynamism** factor was based on the scales *aggressive-meek* and *active-passive.* The **objectivity** factor was based on the scales *open-minded–closed-minded* and *objective-subjective.*

Whitehead's (1968) results are similar to the suggestions of Hovland and Weiss (1951) in that they showed trustworthiness to be an important dimension. The professionalism or competence dimension is also similar to Hovland and Weiss's dimension of expertness, although it differs in dealing more with manner of presentation than with the actual knowledge that a person might possess. Whitehead's research suggests that source credibility is more complicated than that, however, with dynamism and objectivity being important components.

If a high-credibility source is effective in producing attitude change, does that source lose or gain effectiveness if it becomes associated with a large number of messages? This problem can come up in the field of advertising, where celebrities may be hired to endorse a number of different products. For in-

stance, basketball superstar Michael Jordan was at one time endorsing products for 14 companies. An experiment by Tripp, Jensen, and Carlson (1994) exposed viewers to advertisements that involved endorsements of Visa credit cards, Kodak film, Colgate toothpaste, and Certs breath mints by Dustin Hoffmann and Matthew Broderick. When one of these celebrities endorsed four products, he was perceived as less trustworthy and less of an expert than when he endorsed one or two. The attitude toward the ad also became more negative with four products than with one or two. So there is evidence that making multiple endorsements can reduce the effectiveness of a high-credibility source.

Still other research has been done on source credibility since the original Hovland and Weiss (1951) study. Some researchers have challenged the existence of a *sleeper effect.* Gillig and Greenwald (1974) were unable to produce a **sleeper effect**—that is, a statistically significant increase in opinion change for a group exposed to a low-credibility source—in seven replications of an experiment designed to show this effect. Furthermore, their review of the literature indicated no previous study had really shown that kind of sleeper effect. What the earlier studies, including that of Hovland and Weiss, had shown was a significant difference in the effects of high- and low-credibility sources over time, but that is not the same as a significant increase in opinion change for a group exposed to a low-credibility source.

Other research has shown additional support for a sleeper effect, however. Cook and Flay (1978) used the term **absolute sleeper effect** to refer to the kind of change found in the preceding study—a statistically significant increase in attitude change over time for a group exposed to a low-credibility source. They report that "demonstrably strong tests of the absolute sleeper effect have recently been conducted, and they repeatedly result in absolute sleeper effects" (p. 19).

In applying source credibility research, one should remember that the same source will not have high credibility for all audience members. In an effort to get newly eligible (teenage) voters to vote, the Rock the Vote campaign enlisted pop star Madonna and rapper Ice-T for their television public service announcements. The same sources probably would not work with older audience members.

Fear Appeals

Another common tactic in mass communication is to threaten or arouse some fear in the audience—a technique called a **fear appeal.** Films shown to teenagers to promote safe driving sometimes show terrible traffic accidents and what they do to people. A television commercial for an insurance company arouses fear by saying, "You need something to help keep these promises, even if you're not there."

The book *Communication and Persuasion* (Hovland, Janis, and Kelley, 1953) describes a classic experiment by Janis and Feshbach aimed at investigating the effectiveness of fear appeals in producing attitude change. On the basis of learning theory, a key element in the Hovland approach, it can be predicted that a strong-fear appeal would lead to increased attitude change because it would increase

arousal and bring about greater attention and comprehension. Motivation to accept the recommendations of the communication would also be increased. In reinforcement theory terms, learning and practicing the recommended procedure should become associated with the reinforcement of reduced fear and anxiety. On the other hand, the researchers realized that a high degree of emotional tension could lead to spontaneous defensive reactions and the possibility of the audience distorting the meaning of what is being said. Part of their research purpose was to investigate this potentially adverse effect of a strong-fear appeal.

Janis and Feshbach (Hovland, Janis, and Kelley, 1953) designed an experiment that was based on three different messages with three different levels of fear appeal. They selected dental hygiene as their topic. The subjects were the entire freshman class of a large Connecticut high school. The class was randomly divided into four groups, three of which were to get the different fear messages and one of which was to be a control group. The basic message, common to all three fear levels, was a standard lecture on dental hygiene. The level of fear was varied primarily through changing the material used to illustrate the lecture. In the minimal-fear appeal, the illustrative material used X rays and drawings to represent cavities, and any photographs used were of completely healthy teeth. In the moderate-fear appeal, photographs of mild cases of tooth decay and oral diseases were used. In the strong-fear appeal, the slides used to illustrate the lecture included very realistic photographs of advanced tooth decay and gum diseases. The strong-fear condition also contained some personalized threats, such as the statement, "This can happen to you." The control group received a lecture on the structure and function of the human eye.

Subjects were given a questionnaire asking specific questions about their dental hygiene practices one week before the lecture and one week after. Comparison of these questionnaires would show whether subjects changed their dental hygiene behavior after being exposed to the various types of messages. The results (Table 8.1) show that the minimal-fear appeal was the most effective in getting the students to follow the dental hygiene recommendations in the lecture. The strong-fear appeal was the least effective. This was definite evidence that a fear appeal can be too strong and can evoke some form of interference that reduces the effectiveness of the communication.

Table 8.1 Conformity to Dental Hygiene Recommendations in Subjects Who Received Messages with Different Levels of Fear

	Strong-Fear Appeal (%)	Moderate-Fear Appeal (%)	Minimal-Fear Appeal (%)	Control-Group (%)
Increased Conformity	28	44	50	22
Decreased Conformity	20	22	14	22
No Change	52	34	36	56

Source: Adapted from C. I. Hovland, I. L. Janis, and H. H. Kelley. *Communication and Persuasion* (New Haven, Conn.: Yale University Press, 1953), p. 80. Copyright © 1953 by Yale University Press. Reprinted by permission.

This experiment had several strengths that have not always been present in later attitude-change studies. One is that the message was shown to have an effect on reported behavior and not just on a paper-and-pencil measure of a hypothetical attitude. The field of attitude-change research was involved in a controversy a few years later in which many studies were criticized for producing slight changes in unimportant attitudes. Second, the study showed that the persuasive messages used by Janis and Feshbach produced long-term attitude change. Another criticism of some later attitude-change studies is that they dealt only with short-term attitude change, often measured immediately after the message. Janis and Feshbach went back to their subjects a year later and still found the differences in attitude change between their experimental groups.

The Janis and Feshbach study was the first of a number of studies on fear appeals. Not all these studies have agreed with the finding that strong fear produces less attitude change. One possible explanation for the findings of Janis and Feshbach is that the recommendation of brushing your teeth properly was not seen as a believable recommendation for preventing the kinds of horrible consequences presented in the strong-fear appeal. Other studies have shed some light on this possibility. Leventhal and Niles (1964) presented a message to audiences at a New York City health exposition recommending that they get a chest X ray and that they stop smoking. The message was presented to different groups with differing levels of fear: high fear (featuring a color movie of removal of a lung), medium fear (featuring the same color movie but without the graphic scene of a lung removal), and low fear (with no movie). They found that the amount of reported fear in audience members was correlated with stated intentions to stop smoking and to get a chest X ray. These results suggest that fear facilitates attitude change—the opposite of the Janis and Feshbach finding. What could account for this difference? Possibly the difference was due to the degree to which the recommendations appeared to be effective. Toothbrushing may not have seemed adequate to prevent the rotted teeth and bloody gums seen in the Janis and Feshbach experiment. In contrast, stopping smoking may appear to be a believable recommendation for preventing lung cancer.

On the basis of the Janis and Feshbach experiment and other research, Janis (1967) formulated a model suggesting that the relationship between fear appeal and attitude change is curvilinear. This model specifies that low and high levels of fear in a message will lead to small amounts of attitude change and that moderate levels of fear will lead to the greatest amount of attitude change. This inverted U-shaped curve was the dominant view of the relationship between fear and attitude change for many years.

A different approach to the role of fear in persuasion, *protection motivation theory,* was developed by Rogers (1975) as an alternative to Janis's curvilinear theory. Advocates claim that "the PM model is superior to the curvilinear approach because it provides a clearer prescription for how to develop messages that can influence adaptive behavior" (Tanner, Hunt, and Eppright, 1991, p. 37).

Building on the Leventhal and Niles (1964) research as well as on some other research of his own, Rogers (1975) developed a model that summarizes three key elements in the operation of a fear appeal: (1) the magnitude of noxiousness of a

depicted event, (2) the probability of that event's occurrence, and (3) the efficacy of a recommended response. Each component brings about a process of cognitive appraisal, and these cognitive appraisal processes then determine the amount of attitude change (Figure 8.2). That is, when audience members receive a fear appeal, they weigh it in their minds. If the portrayed noxiousness or horribleness of the event is not believed, or the event is thought to be unlikely, or the recommended actions are not believed to be adequate to deal with the threat, then attitude change is not likely. Rogers calls his model a **protection motivation theory** of fear appeals and attitude change. Attitude change is said to be a function of the amount of protection motivation aroused by the cognitive appraisal that the audience member goes through.

Reardon (1989) discussed how fear appeals might best be used in a communication about AIDS that is addressed to teenagers (who typically perceive the threat of death as remote). She suggested that mass media messages aimed at adolescents emphasize the more immediate consequences of the disease, including mental problems, skin rashes and sores, and the negative effect on a teenager's social life. She suggested, furthermore, that the media campaigns be combined with interpersonal question-and-answer sessions, in which discussion

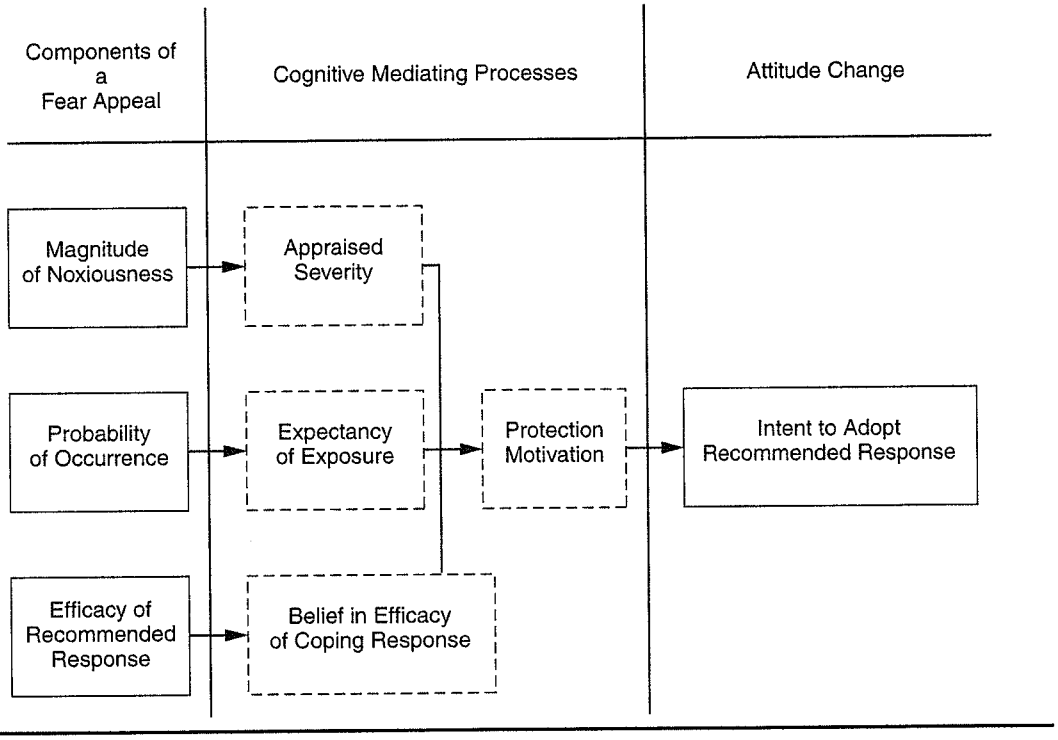

Figure 8.2 A model of protection motivation theory. *Source:* From R. W. Rogers, "A Protection Motivation Theory of Fear Appeals and Attitude Change," *Journal of Psychology* 91 (1975): 99. Reprinted with permission of the Helen Dwight Reid Educational Foundation. Published by Heidref Publications, 4000 Albemarle St., N.W., Washington, D.C. 20016. Copyright © 1975.

can bring out information regarding methods for avoiding the problems described or depicted in the media messages.

The effectiveness of fear appeals in condom advertisements that stress the prevention of AIDS was studied by Hill (1988). He found that subjects had more positive attitudes toward a moderate-fear appeal (stating that sex can be a risky business) than either a nonfear appeal (stressing the sensitivity of the condom and saying nothing about AIDS) or high-fear appeal (mentioning the possibility of death). Hill speculated that a nonfear appeal may appear inappropriate in an AIDS environment, but that a high-fear appeal may be viewed as too threatening when it is combined with the individual's existing level of AIDS-related anxiety.

One important decision regarding fear appeals concerns whether they will be presented in a "loss frame" or a "gain frame" (Hale and Dillard, 1995). A **loss frame** presents the threat in terms of lost opportunities or increased negative consequences. A **gain frame** presents the threat in terms of gained opportunities or decreased negative consequences. For example, a loss-frame message encouraging women to perform self-examinations of their breasts might state "Research shows that women who do not do Breast Self Examination have a decreased chance of finding a tumor" (Meyerowitz and Chaiken, 1987). A gain-frame message on the same issue might state "Research shows that women who do Breast Self Examination have an increased chance of finding a tumor." The Meyerowitz and Chaiken study indicates that loss frames are more persuasive than gain frames.

Using fear appeals can be a risky endeavor. Research has shown that Public Service Announcements (PSAs) concerning AIDS that were designed to induce fear can induce other emotions as well (Dillard, Plotnick, Godbold, Freimuth, and Edgar, 1996). Furthermore, some of these emotions, such as surprise and sadness, can encourage message acceptance, while others, such as puzzlement and anger, can discourage message acceptance. Use of emotional appeals is tricky—message creators need to be aware that messages intended to evoke one emotion may produce a different response entirely.

INOCULATION THEORY

Sometimes the goal of a communicator might not be to change attitudes but to make attitudes resistant to change. For instance, an antismoking communication campaign might attempt to strengthen the attitudes opposing smoking that many young people might already have.

One of the early studies on making attitudes resistant to change was conducted by Lumsdaine and Janis, colleagues of Carl Hovland (Hovland, Janis, and Kelley, 1953). Their experiment follows up on the earlier work on one-sided and two-sided messages by Hovland, Lumsdaine, and Sheffield (1949).

Lumsdaine and Janis (1953) produced one-sided and two-sided messages arguing that Russia would be unable to produce large numbers of atomic bombs for at least five years. This was a realistic issue for differences of opinion in the early

1950s. The one-sided message argued that the Russians lacked some crucial secrets, that their espionage was not effective, and that Russia was lacking in industry. The two-sided message added brief mentions of the arguments that Russia had uranium mines in Siberia, that it had many top scientists, and that its industry had grown since the war. Several weeks before the messages were presented, all subjects were given a questionnaire to determine their initial opinions. One group received the one-sided message, and another received the two-sided message. A week later, half of each group was exposed to an opposing communication from a different communicator arguing that Russia had probably already developed the atomic bomb. This counterpropaganda brought out some new arguments not included in the two-sided message. Both the initial messages and the counterpropaganda were presented in the form of recorded radio programs. Finally, all subjects were given another questionnaire.

The key question, asked in both the initial and final questionnaires, was this: "About how long from now do you think it will be before the Russians are really producing large numbers of atomic bombs?" The results showed that for those receiving no counterpropaganda, the one-sided and two-sided messages were about equally effective. This replicates the finding of the earlier study by Hovland, Lumsdaine, and Sheffield (1949). The results show a striking difference for those receiving counterpropaganda, however. Those receiving a one-sided message showed almost no remaining attitude change after they were exposed to counterpropaganda. In contrast, those receiving a two-sided message showed almost as much attitude change remaining after counterpropaganda as they did when they were not exposed to counterpropaganda. One of the advantages of the two-sided message over the one-sided message, then, is that it is more effective in building resistance to later persuasive efforts.

Lumsdaine and Janis (1953) speak of the recipient of the two-sided message as becoming "inoculated." This is a medical analogy that William McGuire and Demetrios Papageorgis (1961) drew upon later in developing their **inoculation theory.** McGuire and Papageorgis point out that most people have many unchallenged beliefs and that these beliefs can often be easily swayed once they are attacked because the person is not used to defending them. The situation is similar to that in the medical field when a person is brought up in a germ-free environment and is suddenly exposed to germs. That person's body is vulnerable to infection because it has not developed any resistance. Such a person can be given resistance either by supportive treatment—good diet, exercise, rest, and so forth—or by inoculation, a deliberate exposure to a weakened form of the germ that stimulates the development of defenses. In the medical area, the inoculation approach has been more effective than supportive treatment in producing resistance. The word *immunization* can be applied to either of these methods of building immunity—the supportive approach or the inoculation approach.

A number of experiments have been conducted to test inoculation theory. One of the first (McGuire and Papageorgis, 1961) tested the basic prediction that the supportive approach of preexposing a person to arguments supporting basic beliefs would have less immunizing effectiveness than the inoculation approach of preexposing the person to weakened, defense-stimulating forms of arguments

attacking the beliefs. It also tested a second hypothesis that active participation during exposure to a defense should be less effective than passive participation in producing immunity to later persuasion. The researchers made this prediction because they theorized that subjects would not be accustomed to active participation in defending their basic beliefs and so would not do it very well. Furthermore, they thought that active participation might interfere with the reception of any defensive material presented.

The researchers selected for their study some beliefs that were hardly ever attacked in our culture, which they called "cultural truisms." The four beliefs were these: "Everyone should get a chest X ray each year in order to detect any possible tuberculosis symptoms at an early stage." "The effects of penicillin have been, almost without exception, of great benefit to mankind." "Most forms of mental illness are not contagious." "Everyone should brush his teeth after every meal if at all possible." These cultural truisms were so widely believed that control groups of subjects rated them at an average level of 13.26 on a scale ranging from 1 for "definitely false" to 15 for "definitely true."

Subjects took part in two one-hour experimental sessions held two days apart. The first exposed subjects to the two types of immunizing material designed to make the basic beliefs ("cultural truisms") more resistant to change; the second exposed subjects to strong counterarguments attacking the basic beliefs. Questionnaires were administered at the end of each session to measure strength of acceptance of beliefs.

The two major types of immunizing material presented to subjects were *supportive* and *refutational.* The supportive material was made up of arguments supporting the cultural truisms. The refutational material consisted of possible counterarguments against the cultural truisms together with refutations of these counterarguments. The amount of participation in the defense was varied primarily by having subjects write in a high-participation condition and read in a low-participation condition. Each subject was tested on one cultural truism for which he or she received no immunization but did receive the later counterarguments. The average scale position for these beliefs after they were attacked was 6.64, compared with the average level of 13.26 prior to attack. This result shows that the cultural truisms were highly vulnerable to attack if no immunization was given.

McGuire and Papageorgis (1961) found, as they had predicted, that the refutational defenses were more effective in making the cultural truisms resistant to change than were the supportive defenses. After the supportive defenses, the counterarguments were able to reduce the belief in the cultural truisms to an average rating of 7.39, only slightly better than the 6.64 level achieved when there was no prior preparation at all. After the inoculation defenses, the counterarguments were able to reduce the beliefs in the cultural truisms only to an average scale rating of 10.33. The authors also found support for their second hypothesis: The passive (reading) conditions had a greater effect in making beliefs resistant to persuasion than did the active (writing) conditions.

The McGuire and Papageorgis (1961) experiment was limited in one respect that needed further investigation. The attacks on the cultural truisms that were

presented and then refuted in the inoculation were the same attacks that were presented in the next session when the cultural truisms were assailed. It was not clear whether presenting and refuting one set of attacks would also provide later immunity to a different set of attacks. This question was investigated in another experiment by Papageorgis and McGuire.

Papageorgis and McGuire (1961) predicted that a kind of generalized immunity would develop when people were exposed to attacks on basic beliefs and refutations of those attacks. That is, they predicted that this procedure would develop a general resistance that would make the basic belief unlikely to change even when it was exposed to attacks that were not the same. They expected this result for two reasons: (1) The experience of seeing the first attacks refuted could lower the credibility of the later attacks. (2) Preexposure to attacks may make a person more aware that his or her beliefs are indeed vulnerable and motivate the person to develop additional supporting arguments. Their results showed that inoculation led to an immunity to differing counterarguments that was almost as strong as the immunity to the same counterarguments. In fact, the final attitude positions in these two conditions were not significantly different. This, of course, increases the effectiveness of an inoculation—the developers of the inoculation program do not have to anticipate all the attacks on a belief to which a person might later be exposed.

Recent research has tried to investigate the process by which inoculation takes place. Pfau and colleagues (1995) investigated the role of threat and involvement in inoculation. They argue that threat plays a role in inoculation by increasing people's desire to defend their beliefs. Basically, threat triggers the receiver's motivation to make attitudes resistant to change. Indeed, without some degree of threat, there might not be an inoculation effect. By *involvement,* they mean the salience of a particular attitude object to a particular subject. If there is no involvement—that is, if the attitude object is not a salient one—inoculation will probably not take place. Furthermore, involvement may be a necessary precondition for there to be perceived threat. Inoculation has been an effective technique in health communication campaigns, including those aimed at preventing teenagers from smoking (see Box 8.2).

THE FUNCTIONS OF ATTITUDES

The two major theoretical approaches to attitude change—the learning theory approach, primarily associated with Hovland and his associates, and the consistency theory approach, primarily associated with Festinger, Newcomb, Heider, Osgood, and Tannenbaum (Chapter 7)—existed side by side with little apparent relation to one another for some time. But eventually researchers became interested in reconciling these rather different ways of dealing with attitude change. Daniel Katz and his colleagues, Irving Sarnoff and Charles McClintock, tackled this problem, and it led them to develop the *functional approach* to attitude change.

These authors were trying to bring together two different models of human behavior that have been presented over the years—the rational model and the ir-

Box 8.2 Use of Inoculation in an Antismoking Campaign

The theory of inoculation has been applied in antismoking campaigns, particularly those targeting students entering middle school. These students often have antismoking attitudes that are about to come under attack.

The strategy used is one of *refutational preemption*—trying to identify as many attacks as possible and refute them before they are presented to the target audience. On the topic of smoking, the three most common attacking arguments are these:

1. Smoking is "cool."
2. Experimental smoking is not addicting.
3. Smoking will not harm me.

A communication campaign could include messages designed particularly to address these three attacks. The refutations should be appropriately formulated for the audience. For instance, in addressing teenagers about smoking, emotional arguments might work better than factual arguments.

Since the effect of persuasive messages tends to decrease over time, it might be necessary to repeat the inoculation from time to time through "booster messages."

Source: Pfau (1995).

rational model. The **irrational model** suggests that human beings are nonthinking creatures whose beliefs are easily influenced by people around them and who even can have their perception of reality influenced by their own desires. The **rational model** suggests that human beings are intelligent and critical thinkers who can make wise decisions when given ample information. How can both of these models be true? Katz (1960) and his associates suggest that the answer to this dilemma is that human beings are both rational and irrational, depending on the situation, the motivations operating at the time, and so forth. And they argue that this tendency for people to operate with different ways of thinking has important implications for understanding attitude change.

Katz (1960) argues that both attitude formation and change must be understood in terms of the functions that attitudes serve for the personality. As these functions differ, so will the conditions and techniques of attitude change. Katz points out that much of the earlier research on mass communication dealt with factors that are not really psychological variables, such as exposure to a motion picture. Since being exposed to a motion picture can serve different functions for different individuals, Katz argues that the researcher dealing only with exposure to a film is not really able to understand or predict attitude change. Katz makes the key point that the same attitude can have a different motivational basis in different people. He suggests that "unless we know the psychological need which is met by the holding of an attitude we are in a poor position to predict when and how it will change" (p. 170).

Katz (1960) identifies the following four major functions that attitudes can serve for the personality:

1. The **instrumental, adjustive, or utilitarian function.** Some attitudes are held because people are striving to maximize the rewards in their external

environments and minimize the penalties. For instance, a voter who thinks taxes are too high might favor a political candidate because that candidate promises to reduce taxes.

2. The **ego-defensive function.** Some attitudes are held because people are protecting their egos from their own unacceptable impulses or from knowledge of threatening forces without. Feelings of inferiority are often projected onto a minority group as a means of bolstering the ego. This would be an example of an attitude of prejudice serving the ego-defensive function.
3. The **value-expressive function.** Some attitudes are held because they allow a person to give positive expression to central values and to the kind of person one feels he or she is. For instance, a teenager who likes a particular rock and roll group is expressing his or her individuality through this attitude.
4. The **knowledge function.** Some attitudes are held because they satisfy a desire for knowledge or provide structure and meaning in what would otherwise be a chaotic world. Many religious beliefs serve this function, as do other attitudes such as the shared norms of a culture.

Katz (1960) presented a table (see Table 8.2) summarizing the origin and dynamics, the arousal conditions, and the change conditions for attitudes serving each of the four functions. Katz warns that an attempt to change an attitude may backfire if it is not based on an understanding of the functions the attitude is serving. For instance, an attempt to change attitudes of prejudice by presenting factual information on the accomplishments of minority group members would be an attempt to change the attitudes as if they were serving the knowledge function. It is not likely to succeed if the attitudes of prejudice are held for ego-defense reasons.

Katz's (1960) **functional approach** suggests that a persuasive message should be tailored to correspond to the motivational base for which an attitude is held. But some research has suggested that it can be effective to use a persuasive approach that does not match up with the reasons the attitude is being held (see Box 8.3).

ATTITUDES AND BEHAVIOR

Despite all the research on attitude change, researchers for a long time neglected an important question. In its more general form, the question is whether attitudes as they are measured by social science methods have any real relation to behavior. In its more specific form, the question is whether attitude change produced by persuasive messages is accompanied by any meaningful change in behavior.

One early study (LaPiere, 1934) had indicated that attitudes might not bear much of a relationship to behavior. A social scientist, Richard LaPiere, traveled in the early 1930s around the United States with a young Chinese couple. They

Table 8.2 Determinants of Attitude Formation, Arousal, and Change in Relation to Type of Function

Function	Origin and Dynamics	Arousal Conditions	Change Conditions
Adjustment	Utility of attitudinal object in need satisfaction. Maximizing external rewards and minimizing punishments	1. Activation of needs 2. Salience of cues associated with need satisfaction	1. Need deprivation 2. Creation of new needs and new levels of aspiration 3. Shifting rewards and punishments 4. Emphasis on new and better paths for need satisfaction
Ego Defense	Protecting against internal conflicts and external dangers	1. Posing of threats 2. Appeals to hatred and repressed impulses 3. Rise in frustrations 4. Use of authoritarian suggestions	1. Removal of threats 2. Catharsis 3. Development of self-insight
Value Expression	Maintaining self-identity; enhancing favorable self-image; self-expression and self-determination	1. Salience of cues associated with values 2. Appeals to individual to reassert self-image 3. Ambiguities that threaten self-concept	1. Some degree of dissatisfaction with self 2. Greater appropriateness of new attitude for the self 3. Control of all environmental supports to undermine old values
Knowledge	Need for understanding, for meaningful cognitive organization, for consistency and clarity	1. Reinstatement of cues associated with old problem or of old problem itself	1. Ambiguity created by new information or change in environment 2. More meaningful information about problems

Source: From D. Katz, "The Functional Approach to the Study of Attitudes," *Public Opinion Quarterly* 24 (1960): 192. Copyright 1960 by Princeton University. Reprinted by permission of the University of Chicago Press.

made 251 visits to hotels and restaurants, and in only one case were they refused service. Six months later, LaPiere sent a questionnaire to each establishment asking: "Will you accept members of the Chinese race as guests in your establishment?" He received replies from 128 of these businesses. The responses from 92 percent of the restaurants and 91 percent of the hotels were *no*. Only one person gave a definite *yes*. This classic study, then, provided some evidence that people's

Box 8.3 Influence of Attitude Type and Argument Type on Attitude Change

People attempting to persuade others need to pay attention to the basis upon which an attitude is held when they try to change it. For some individuals, the cognitive (or rational) component of an attitude may be strongest. For others, the affective (or emotional) component of the same attitude may be strongest.

Millar and Millar (1990) hypothesized that different types of arguments might be effective depending on which component of the attitude was strongest. They also hypothesized that a rational argument might be most persuasive when the affective component is strongest and that an emotional argument might be most persuasive when the cognitive component is strongest. Their reasoning was that when the argument and the type of attitude are matched, the communication might be seen as threatening and might stimulate counterarguing.

The researchers designed emotional and rational messages to change students' attitudes toward beverages and found that, as predicted, the rational messages were most effective in changing the attitudes held for emotional reasons and the emotional messages were most effective in changing the attitudes held for rational reasons.

Source: Millar and Millar (1990).

verbal reports of their attitudes might not be very good predictors of their actual behavior.

In an address in 1963, Leon Festinger, the psychologist who developed the theory of cognitive dissonance, raised some basic questions about attitude-change experiments and subsequent behavior. Festinger (1964) said he had been reading a manuscript by Arthur R. Cohen when he came across the statement that very little work on attitude change had dealt explicitly with the behavior that may follow a change in attitude. Festinger was intrigued by this notion and attempted to find as many studies as he could that showed an effect of attitude change on subsequent behavior change. He found only three. One of these was the Janis and Feshbach study of fear appeals (Hovland, Janis, and Kelley, 1953). Their study did not investigate actual behavior change, but it did look at verbal reports of toothbrushing behavior and other dental hygiene behavior. Festinger was willing to accept this verbal report since it did purportedly deal with actual behavior. In all three of the studies that Festinger found, there seemed to be a slight inverse relationship between attitude change and behavior change. For instance, in the Janis and Feshbach study, the individuals who indicated the most concern about their teeth after receiving the persuasive messages showed the least change in their reported behavior. Festinger argued that this inverse relationship indicates that the relationship between attitude change and behavior is not a simple one.

One reason attitude change might not be automatically followed by behavior change, Festinger (1964) suggested, is that the environmental factors that had produced an original attitude would usually still be operating after that attitude was changed. Thus, there would be a tendency for an attitude to revert to its original position after exposure to a persuasive message. Festinger was suggesting to

attitude-change theorists the disturbing possibility that they had conducted hundreds of experiments on variables that make very little difference in terms of human behavior.

Realizing that the prediction of a specific behavior depends on a number of factors in addition to some kind of measure of attitude, Martin Fishbein attempted to develop a model that would include all the important factors. The model (see Ajzen and Fishbein, 1970) takes the form of the following equation:

$$B \sim BI = [A_{act}]w_0 + [NB(M_c)]w_1$$

Although the model looks complicated, it becomes easier to understand when it is put into words. The letters in the equation can be translated as follows:

B = Overt behavior

BI = Behavioral intention to perform that behavior

A_{act} = Attitude toward performing a given behavior in a given situation

NB = Normative beliefs, or beliefs that significant others think one should or should not perform the behavior

M_c = Motivation to comply with the norm C

w_0 and w_1 = Regression weights to be determined empirically

The equation can be rephrased in the following English sentence: A person's intention to perform a given behavior is a function of (1) the person's attitude toward performing that behavior and (2) the person's perception of the norms governing that behavior and the individual's motivation to comply with those norms.

This model brings in some of the key situational factors, particularly the beliefs that other people have about the behavior and the individual's motivation to conform to those beliefs. If precise measurements could be made of all the variable quantities in the model, it should be possible to make rather exact predictions of behavioral intention and then of actual behavior. Fishbein (1973) reports that a number of experiments using the model to predict behavioral intention have produced multiple correlations of about .80, which are quite high. These experiments also found correlations between behavioral intention and overt behavior of .70, so all the key parts have been supported. In a continuation of the Fishbein research, Ajzen (1971) has used the Fishbein model to demonstrate behavioral change as the result of persuasive communication, the phenomenon that Festinger had difficulty finding in 1963.

One significant development in attitude-change research is that many researchers are now including behavioral measures in their studies. For instance, many fear appeal studies now include behavioral measures such as the "disclosing wafer" test of how well teeth are actually cleaned (Evans, Rozelle, Lasater, Dembroski, and Allen, 1970) or the actual act of going to get a shot or vaccination (Krisher, Darley, and Darley, 1973). Similarly, the Stanford project aimed at reducing heart disease through communication used such behavioral measures as blood pressure, cholesterol level, weight, and number of cigarettes smoked (Maccoby and Farquhar, 1975).

CLASSICAL CONDITIONING OF ATTITUDES

Some other researchers besides Hovland have also attempted to apply learning theory to attitude change. In particular, Staats and Staats have applied classical conditioning to the learning of attitudes (Staats, 1968).

Staats and Staats begin by demonstrating the application of classical conditioning to the learning of the emotional meaning of language (Staats, 1968). In a typical example of classical conditioning, a dog is presented with a ringing bell every time he is given food. After a number of presentations, the dog will salivate when presented with the bell without the food. The food is the unconditioned stimulus, the bell is the conditioned stimulus, and the salivation is the response. They point out that in our everyday experience certain words are systematically paired with certain emotional experiences. For instance, words like *joy, happy, play, dinner, pretty,* and *good* are typically paired with positive emotions; while words like *angry, hurt, dirty, awful, sick, sad,* and *ugly* are typically paired with negative emotions. In the terms of classical conditioning, the emotional stimuli can be considered the unconditioned stimuli that elicit emotional responses. When a word stimulus is systematically paired with such an unconditioned stimulus, the word should become a conditioned stimulus and also elicit the emotional responses.

In an experiment designed to test this possibility, researchers exposed two groups of subjects to a list of spoken words (Staats, Staats, and Crawford, 1962). For the experimental group, 9 of the 14 times a subject was presented with the word *large,* it was followed by a negative stimulus—either a loud noise delivered by earphone or a shock to the right forearm. Both noise and shock were set at a level where they were "uncomfortable" but not "painful." Members of the control group also received the negative stimuli nine times, but they were paired with different "filler" words other than *large.* Results showed that those subjects who experienced the word *large* being paired with the aversive stimulus came to display an emotional reaction, as measured by the galvanic skin response (GSR), when presented with this word. This was not true for the control group. Furthermore, measurements with semantic differential scales showed that *large* had acquired a negative rating on the evaluative scale for the experimental group that it did not have for the control group.

Staats and Staats (1957) went on to hypothesize that this conditioning of meaning should work from word to word as well as from a physical stimulus to a word. In another experiment, nonsense syllables such as *yof, laj, xeh, wuh, giw,* and *qug* were presented visually on a screen while words were presented aurally. For one group of subjects, two of the nonsense syllables were always paired with words that had high loadings on evaluative meaning, such as *beauty, win, gift, sweet,* and *honest.* A different high-evaluation word was used in every pairing, so that subjects would not associate particular pairs of words. The other four nonsense syllables were paired with words that had no systematic meaning. For another group of subjects, the procedures were identical except that the two nonsense syllables were always paired with words with negative emotional meaning, such as *thief, bitter, ugly, sad,* and *worthless.* Subjects were later given se-

mantic differential scales to measure their evaluative meanings for the nonsense syllables, and those scales showed positive ratings in general for the group receiving positive stimulus words and negative ratings in general for the group receiving negative stimulus words.

Staats and Staats (1957) argue that attitude is nothing more than this kind of emotional meaning for a word that has been established by classical conditioning. In another experiment (Staats and Staats, 1958), names of nations and familiar masculine names were used as the conditioned stimulus rather than nonsense syllables. The national names were *Dutch* or *Swedish,* and the masculine names were *Tom* and *Bill.* For all four of these, subjects would be expected to have existing attitudes on the basis of prior experience. Thus, the experiment was really a study of attitude change. The experiment showed that pairing any of the four words with either positive or negative words could condition the subjects' attitudes in either a positive or a negative direction. The Staats and Staats research provides a theoretical explanation for some of the propaganda devices, such as *glittering generality,* which attempts to link a person or idea to a virtue word, or *name calling,* which attempts to associate a person or idea with a bad label.

This conditioning of attitudes also seems to be related to much of what goes on in advertising. Many product names, such as Ipana or Qantas, are essentially nonsense syllables to the public when they are first introduced. A major goal of advertising is to associate them with positive words or experiences, which, through conditioning, might give them a positive meaning. A slogan such as "Coke is the real thing" is attempting to transfer positive associations to Coke. In the cases of some other products, such as Fab or Sprite, the product name might be chosen because of positive associations that it already has.

PROCESS MODELS OF PERSUASION

The newer process models of persuasion have their roots in Greenwald's **cognitive response model** (Greenwald, 1968). Greenwald's model, which states that attitude change is mediated by the thoughts that occur in the recipient's mind, grew out of his dissatisfaction with the Hovland idea that all attitude change is based on learning. Greenwald argued that retention of a message and acceptance of a message are two different things—an individual can learn the material in a message without undergoing attitude change. He postulated that in the typical case of persuasion the receiver of a message reflects upon it, relating it to existing attitudes, knowledge, and feelings. In doing so, the receiver rehearses cognitive material that has already been stored. Greenwald's model suggests that these cognitive responses to a persuasive message are an important part of the persuasion process that should not be overlooked.

Major process models of persuasion are McGuire's (1968) *information-processing theory* and two dual-process models—Petty and Cacioppo's (1986) *elaboration likelihood model* and Chaiken, Liberman, and Eagly's (1989) *heuristic-systematic model.* These models share the following characteristics:

1. They present attitude change or persuasion as a process that takes place through several steps and over time.

2. They involve an emphasis on cognition or information processing.
3. They give a more active role to the receiver as an information-processing agent than earlier conceptions of persuasion or attitude change.

In addition, the two dual-process models state that each individual receiving a persuasive message has two different mental procedures available for processing that message.

McGuire's Information-Processing Theory

McGuire's (1968) *information-processing theory* suggests that attitude change involves six steps, with each step being a necessary precedent for the next. The steps are as follows:

1. The persuasive message must be communicated.
2. The receiver will attend to the message.
3. The receiver will comprehend the message.
4. The receiver yields to and is convinced by the arguments presented.
5. The newly adopted position is retained.
6. The desired behavior takes place.

McGuire notes that any independent variable in the communication situation can have an effect on any one or more of the six steps. A variable such as intelligence, for instance, might lead to less yielding, because the more intelligent person is better able to detect flaws in an argument and is more willing to maintain an opinion not held by others. But it might lead to more attention because the more intelligent person has a greater interest in the outside world.

McGuire (1968) also points out that it is typical for independent variables to affect one step in a positive way and another step in a negative way. A fear appeal, for instance, might increase attention to the message, Step 1, but interfere with yielding to the arguments presented, Step 4.

In a later article, McGuire (1976) presented eight steps in the information-processing theory: (1) exposure, (2) perception, (3) comprehension, (4) agreement, (5) retention, (6) retrieval, (7) decision making, and (8) action. It is obvious that this list of steps is built upon the earlier six-step sequence, but with some of the earlier steps reconceptualized and some new steps added.

In a still later article, McGuire (1989) presented 12 steps in the output or dependent variable side of the persuasion process: (1) exposure to communication, (2) attending to it, (3) liking or becoming interested in it, (4) comprehending it (learning what), (5) skill acquisition (learning how), (6) yielding to it (attitude change), (7) memory storage of content and/or agreement, (8) information search and retrieval, (9) deciding on basis of retrieval, (10) behaving in accord with decision, (11) reinforcement of desired acts, and (12) postbehavioral consolidating.

As initially presented, McGuire's theory tended to deal almost exclusively with the dependent variables in the persuasion process, splitting them into more

and more categories until there were 12. In other works, such as his 1989 chapter, McGuire also discusses the roles of independent variables.

McGuire's information-processing theory gives us a good overview of the attitude-change process, reminding us that it involves a number of components. Few previous theories have addressed all of these components, and few, if any, attitude-change studies looked at the effects of independent variables on all of these steps. In fact, as McGuire pointed out, most of the extensive attitude-change literature has probably focused on the step of yielding or agreement.

Finally, McGuire's theory reminds us of the difficulty of attitude change. The theory suggests that many independent variables tend to cancel themselves out in their overall effects by having a positive effect on one step in the process of attitude change but a negative effect on other steps in the process of attitude change. Furthermore, we must face the fact that successful attitude-change attempts need to accomplish the desired effects specified by each of the various steps.

The Heuristic-Systematic Model

The *heuristic-systematic model* (Chaiken, Liberman, and Eagly, 1989) describes two ways of processing persuasive messages—systematic and heuristic. **Systematic processing** reflects careful, analytic, and effortful examination of the message. People must be motivated to practice systematic processing, and it can be adversely affected by situational variables such as time pressure or lack of expertise in a particular subject area. **Heuristic processing** is a more simplistic mode in which people use inferential rules or schemas to form judgments or make decisions. Examples of rules that might guide decision making under heuristic processing are "statements by experts can be trusted," "attractive people are sociable," and "people's actions reflect their attitudes."

The Elaboration Likelihood Model

Most people living in contemporary society are bombarded by mass media messages, many of them attempting to persuade them of something. It is obviously impossible for a receiver to deal with all these messages at great length. Typically, we select some messages for detailed examination and deal with others in a more peremptory fashion, if at all. A model of persuasion that acknowledges these two different means of processing messages is Petty and Cacioppo's (1986) elaboration likelihood model (Figure 8.3).

The *elaboration likelihood model* (ELM) states that there are two routes to attitude change—the central route and the peripheral route (Petty and Cacioppo, 1986). The **central route** is involved when the receiver actively processes the information and is persuaded by the rationality of the arguments. The **peripheral route** is involved when the receiver does not expend the cognitive energy to evaluate the arguments and process the information in the message and is guided more by peripheral cues. These cues can include source credibility, the style and format of the message, the mood of the receiver, and so forth.

When the central route to persuasion is active, the receiver is said to be involved in high elaboration. When the peripheral route to persuasion is active, the

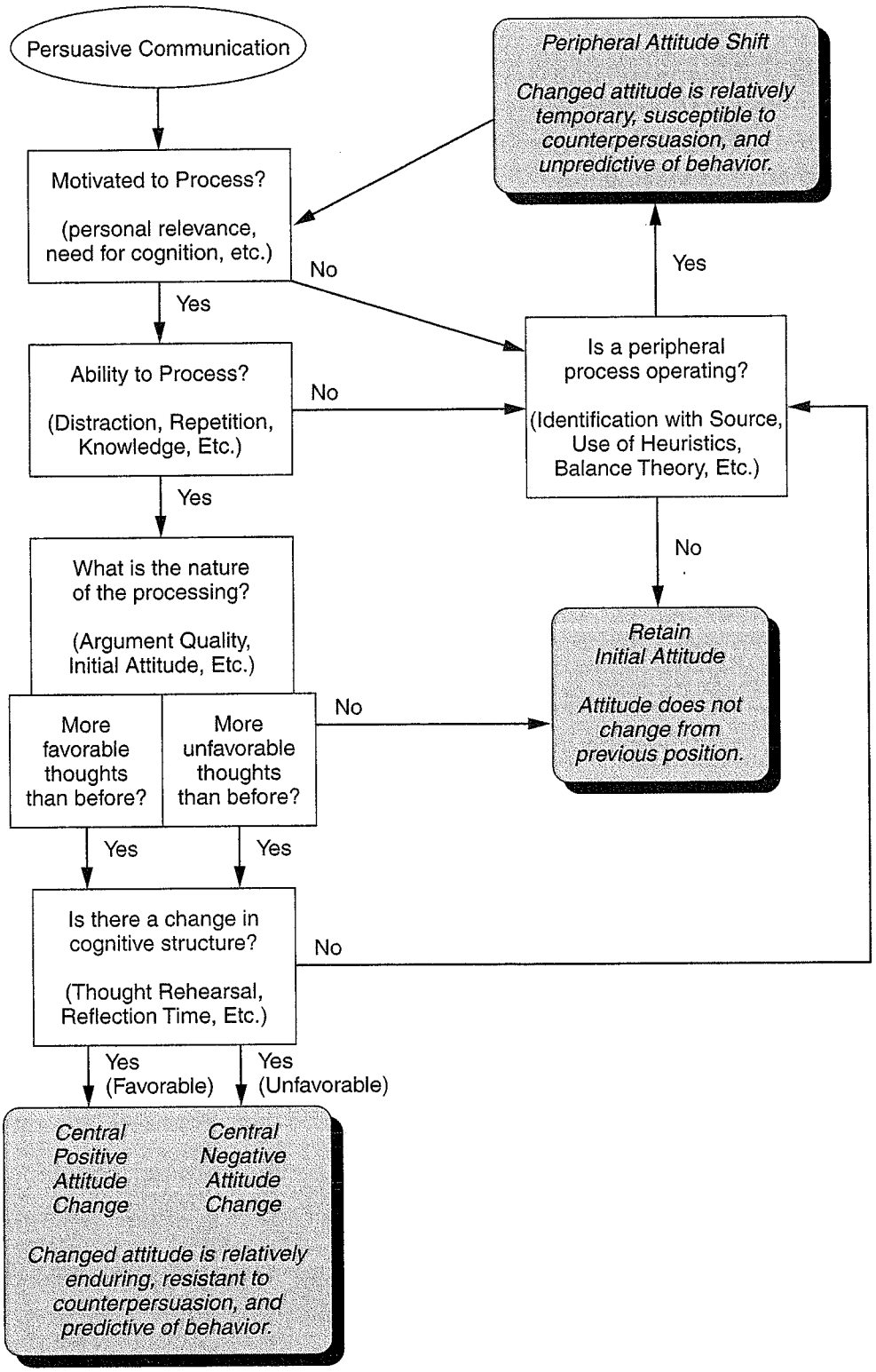

Figure 8.3 The elaboration likelihood model of persuasion. Figure reprinted with permission of Richard E. Petty.

receiver is said to be involved in low elaboration. Elaboration refers to cognitive work involved in processing a persuasive message. Petty and Cacioppo (1986, p. 7) state that **elaboration** refers to "the extent to which a person carefully thinks about issue-relevant information." Elaboration involves attending carefully to the appeal, attempting to access relevant information (from memory or external sources), scrutinizing and making inferences about the arguments, drawing conclusions about the merits of the arguments, and reaching an overall evaluation of the recommended position.

Persuasion can take place under either a high degree of elaboration or a low degree of elaboration, or at any point in between, but the model suggests that the process of attitude change will be very different at different degrees of elaboration. When persuasion occurs through the central route, it is usually because high-quality arguments are being strongly presented. With the central route, persuasion is most likely to occur when the receiver is led to have predominantly favorable thoughts about the advocated position. So a key question becomes, *What factors lead the receiver to have either favorable or unfavorable thoughts about the recommended position?* Two factors seem to be important. The first is the agreement between the receiver's initial position and the recommended position. If an advocated position is one toward which a receiver is already inclined, presumably the receiver will be favorably disposed to the message. The second factor is the strength of the argument. The stronger or more carefully defined the argument, the more likely it is that the receiver will be favorably disposed to the message.

Under the peripheral route, persuasion will not depend on thoughtful consideration of the message but on the receiver's use of simple decision rules, or *heuristics.* These principles are activated by cues in the persuasion situation. The three major heuristics are credibility, liking, and consensus (O'Keefe, 1990, pp. 186–187). The *credibility heuristic* refers to the tendency for people to believe sources that have credibility. The *liking heuristic* refers to the tendency for people to agree with people they like. The *consensus heuristic* refers to the tendency for people to agree with positions that a lot of other people support.

An example of persuasion through the peripheral route might involve someone who wants to vote in a local or state election but does not want to take the time to gather information about all the candidates and come to an original decision. Such a person might take the endorsements of candidates from an editorial in the local newspaper and just vote straight down the list. Or, a person might choose a straight party ticket, voting for all the Democrats or all the Republicans. In these cases, the decision rule being used is "Vote the way this trusted source recommends."

What kinds of factors determine which route will be taken, central or peripheral? Two main factors influence the degree of elaboration by a receiver: the receiver's motivation to engage in elaboration and his or her ability to engage in elaboration (O'Keefe, 1990). Overall, the elaboration likelihood model helps to account for a variety of attitude-change studies by bringing them together in the same model. We begin to see that rational models of persuasion, such as information-processing theory, and less rational models, such as the source credibility model, can both be true. The model also helps us to reconcile conflicting results of studies

of the same factor in persuasion. It may be the case that a high-credibility source will lead to attitude change in one situation but not in another if attitude change is taking place through the peripheral route in one situation and the central route in the other.

The elaboration likelihood model and the heuristic-simplistic model are similar. Perhaps the major difference is that heuristic thinking—or the use of rules—is only one of the categories that the ELM would place in the peripheral route.

APPLICATIONS OF PERSUASION THEORY IN THE MASS MEDIA

Mass media practitioners eager to apply the findings of persuasion research to real-world communication problems should realize that there may be some difficulties. There are many variables that might be operating, and the effect of a particular variable can be positive or negative depending on the state of other variables. There is still a gap between studies of attitude change and studies of the link between attitudes and behavior (Eagly, 1992). Most of the research on persuasion has been carried out in laboratory settings, and the extent to which the findings apply to natural settings is often not known.

One important strategy that increases the practitioner's chances of success is to carry out research on the target audience before and during the development of message strategies. An important principle is the notion of **audience segmentation**—the dividing of the audience into homogeneous groups that share certain attitudes, behaviors, and levels of knowledge and that use the same communication channels (Slater, 1995; Lefebvre and Rochlin, 1997). Research on the target audience allows the communicator to tailor messages for maximum impact (see Box 8.4).

Box 8.4 Studying the Target Audience

One of the keys to a successful persuasive campaign is studying the target audience before preparing messages. A media campaign to help prevent smoking among adolescent girls was based on intensive research on the target audience—those girls with the highest risk of becoming smokers. Surveys were conducted to gather information about the girls' cigarette-smoking experiences, perceptions, and attitudes; their favorite leisure activities, wishes, and styles; the persons they admired; and their media habits and television-use patterns. The survey data were used to create campaign objectives that were provided to media producers.

Messages were designed to encourage young people to have a positive view of nonsmoking, to have a negative view of smoking, to have skills for refusing cigarettes, and to have the perception that most people their age do not smoke. Radio and television spots were pretested in public school classrooms. Information gathered from the surveys was also used to schedule the media spots. For instance, soap operas such as *The Guiding Light* and *Days of Our Lives* and situation comedies such as *Who's the Boss?* were popular with the higher risk girls, so spots were scheduled during these programs.

The media campaign was succesful in reducing intention to smoke as well as reports of actual smoking during the past week.

Source: Worden, Flynn, Solomon, Secker-Walker, Badger, and Carpenter (1996).

CONCLUSIONS

The field of attitude-change research has expanded greatly since the early days when the learning theory approach and the consistency theory approach were dominant. Katz's (1960) functional approach was developed specifically to reconcile these two divergent views and fit them both into a larger picture. The Katz approach has drawn particular attention to the problem of changing attitudes serving the ego-defensive function—not an easy kind of attitude to change.

Suggestions for building resistance to attitude change are provided by inoculation theory. Research in this area by McGuire and Papageorgis (1961) and others focuses on the process of making people resistant to persuasion.

Festinger (1964) raised the important issue of whether attitude change produced by persuasive messages was accompanied by any real behavior change. About the same time, researchers began a serious study of whether attitudes in general as they were measured by researchers were useful in predicting behavior. One of the beneficial results of all this questioning is that many attitude-change studies now incorporate behavioral measures as well as attitude measures.

Staats and Staats's (1958) idea that attitudes are learned through classical conditioning suggests a strategy for use in advertising and other persuasive efforts. Under this theory, the goal of a persuasive message is to cause the learning of a positive or negative response to a word.

Single-variable models of persuasion have come to be replaced by models that emphasize persuasion as a process and the active role of the receiver. These models include McGuire's (1968) information-processing theory; Chaiken, Liberman, and Eagly's (1989) heuristic-systematic model; and Petty and Cacioppo's (1986) elaboration likelihood model. These models remind us that persuasion is a complex endeavor. They also offer promise of bringing together some of the diverse findings of research on attitude change into more unified theories.

Key Terms

absolute sleeper effect—see **sleeper effect.**

affective component—a manifestation of an **attitude;** liking or feeling about an object.

attitudes—predispositions to respond positively or negatively toward things.

audience segmentation—the dividing of the audience into homogeneous groups that share certain **attitudes,** behaviors, and levels of knowledge and that use the same communication channels.

behavioral component—a manifestation of an **attitude;** actions toward an object.

beliefs—statements that people assume to be true.

central route—in the elaboration likelihood model (Petty and Cacioppo, 1986), the method involved when the receiver actively processes the information and is persuaded by the rationality of the arguments.

cognitive component—a manifestation of an **attitude; beliefs** about an object.

cognitive response model—a model which states that attitude change is mediated by thoughts occurring in the recipient's mind.

convergent style of research—from McGuire (1996), a style of research in which researchers "bring a variety of theories convergently to bear on the relation of interest."

dynamism—a factor of source credibility based on *aggressive-meek* and *active-passive* scales.

ego-defensive function—the purpose served by **attitudes** that are held because people are protecting their egos from their own unacceptable impulses or from knowledge of threatening forces without.

elaboration—from Petty and Cacioppo (1986), "the extent to which a person carefully thinks about issue-relevant information."

fear appeal—a tactic used in mass communication that threatens or arouses some fear in the audience.

functional approach—from Katz (1960), the idea that a persuasive message should be tailored to correspond to the motivational base for which an **attitude** is held.

gain frame—a **fear appeal** that presents the threat in terms of gained opportunities or decreased negative consequences.

heuristic processing—in the heuristic-systematic model (Chaiken, Liberman, and Eagly, 1989), a way of processing persuasive messages that uses inferential rules or schemas to form judgments or make decisions.

inoculation theory—a theory dealing with making attitudes resistant to change, usually by giving audience members small doses of opposing arguments.

instrumental, adjustive, or utilitarian function—the purpose served by **attitudes** that are held because people are striving to maximize the rewards in their external environments and minimize the penalties.

interattitudinal structure—the clustering together of **attitudes** in groups or sets.

intra-attitudinal structure—the way **components** [see **affective, behavioral,** and **cognitive components**] of an **attitude** relate to one another.

irrational model—in human behavior, the model that suggests that human beings are nonthinking creatures whose beliefs are easily influenced by people around them and who even can have their perception of reality influenced by their own desires.

knowledge function—the purpose served by **attitudes** that are held because they satisfy a desire for knowledge or provide structure and meaning in what would otherwise be a chaotic world.

learning theory—reinforcement theory; the theory that **attitudes** are learned and that they are changed through the same processes that occur when learning takes place.

loss frame—a **fear appeal** that presents the threat in terms of lost opportunities or increased negative consequences.

objectivity a factor of source credibility based on *open-minded–closed-minded* and *objective-subjective* scales.

peripheral route—in the elaboration likelihood model (Petty and Cacioppo, 1986), the method involved when the receiver does not expend the cognitive energy to evaluate the arguments and process the information in the message and is guided more by peripheral cues.

persuasion—from Olson and Zanna (1993), "**attitude** [emphasis added] change resulting from exposure to information from others."

professionalism or competence—a factor of source credibility based on *experienced-inexperienced* and *has professional manner–lacks professional manner* scales.

protection motivation theory—from Rogers (1975), a theory that proposes that **attitude** change is a function of the amount of protection motivation aroused by the cognitive appraisal that the audience member goes through.

rational model—in human behavior, the model that suggests that human beings are intelligent and critical thinkers who can make wise decisions when given ample information.

sleeper effect—a statistically significant increase in opinion change for a group exposed to a low-credibility source; referred to as **absolute sleeper effect** by Cook and Flay (1978).

systematic processing—in the heuristic-systematic model (Chaiken, Liberman, and Eagly, 1989), a way of processing persuasive messages that reflects careful, analytic, and effortful examination of the message.

trustworthiness—a factor of source credibility based on *right-wrong, honest-dishonest, trustworthy-untrustworthy,* and *just-unjust* scales.

value-expressive function—the purpose served by **attitudes** that are held because they allow a person to give positive expression to central values and to the kind of person one feels he or she is.

Discussion

1. Much of the early attitude-change research was based on the notion that attitudes are learned responses. What are some other ways to think of attitudes?
2. Research has shown that attempts to persuade that are based on fear appeals can backfire. What are some alternatives to the use of fear appeals in messages?
3. Evaluate Rogers' protection motivation theory. What are its advantages over the notion of a curvilinear relationship between fear and attitude change proposed by Janis?
4. What are the advantages of the new process models of persuasion over the older Hovland approach to attitude-change theory?
5. What are the disadvantages of the new process models of persuasion?
6. Newspaper reporters can be thought of in terms of low-credibility or high-credibility sources. Why do you think the public has low confidence in newspaper reporters, as public opinion poll results sometimes suggest?
7. What are some of the likely consequences of the low confidence ratings that the public assigns to newspaper reporters?
8. Pick a worthwhile social issue, such as prevention of AIDS. Drawing upon your knowledge of persuasion theory, design a communication campaign to deal with the issue.

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