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Attitudes and Drug Abuse Prevention: Implications of the Elaboration Likelihood Model of Persuasion

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The first and most important truth about the war on drugs is that it is waged by and against individual people. The war will be won only if and when the people decide they will no longer accept drug abuse. The "war," then, is really about changing attitudes.

—Rinehart (Mayor, Columbus, Ohio; 1989, p. 1)

Popular opinion polls suggest that the nation's drug problem and the accompanying crime it engenders is the number one issue of concern to Americans today. In the simplest sense, two categories of solutions have been offered to solve the drug problem. One focuses on eliminating the supply of illicit drugs through various interdiction and law enforcement programs, whereas the other focuses on curtailing the demand for potentially harmful drugs. Importantly, the success of each approach depends in part on the attitudes of Americans toward specific drugs and specific drug programs. For example, efforts to curtail the supply of drugs will likely be more successful to the extent that public attitudes favor additional expenditures for law enforcement, and people think that this approach will be effective. Similarly, the demand for drugs is tied in part to peoples' attitudes about the desirability and/or danger of these substances as well as attitudes toward the effectiveness of drug treatment programs. The nature of public attitudes toward the drug problem and the various solutions to it can have important effects on funding for drug prevention programs.

For example, in November 1989, the voters in Kansas City, Missouri approved a \$.025 sales tax for drug enforcement and rehabilitation efforts. The tax will raise over \$100 million during its 7-year life span.

Given the relevance of attitudes to drug prevention efforts, it is not surprising that proponents of various solutions to the drug problem have attempted to influence the attitudes of individuals and the public at large. For example, in an attempt to garner public support for future efforts to reduce the supply of drugs, local law enforcement officials proudly display captured drugs before the media. The most frequent and systematic attempts to employ attitude change techniques to counter the drug problem, however, have been on the demand side. For example, the U.S. government has sponsored multimedia anti-drug campaigns (e.g., NIDA's "Cocaine, the Big Lie"; see Forman & Lachter, 1989), and local school and police organizations conduct influence programs in small group settings (e.g., project DARE; see DeJong, 1987). This chapter presents a brief overview of psychological approaches to social influence and outlines a general framework for understanding the processes responsible for attitude change. Because most of the empirical studies with respect to persuasion approaches to the drug problem have focused on modifying the demand for drugs rather than their availability (see Shoemaker, 1989; and other chapters in this volume), our focus is here as well.

BEHAVIORAL INFLUENCE VIA PERSUASIVE COMMUNICATION

Many changes have taken place in Americans' knowledge, attitudes, and behaviors with respect to illicit drugs since the 1970s with some changes occurring in a desirable direction, and others in a less favorable direction. An understanding of the causal links among knowledge, attitudes, and behaviors, and some appreciation of the basic mechanisms by which change is achieved, should enhance the likelihood of selecting appropriate strategies to encourage optimal changes. Furthermore, a minimal understanding of basic research findings with respect to human influence may help guard against either overly optimistic or pessimistic assessments of the prospects for changing attitudes and behaviors with respect to illicit drugs. In the next section we outline some of the major theoretical perspectives on changing attitudes and behaviors with persuasive communications.

Overview of Approaches to Persuasion

Social psychologists concerned with the study of human influence have focused on the concept of "attitudes," or peoples' general predispositions to evaluate other people, objects, and issues favorably or unfavorably.

Among the attitudes relevant to the nation's demand for drugs are attitudes toward: (a) oneself (e.g., low self-esteem may contribute to drug use), (b) authority figures (e.g., parents, government officials, and teachers who eschew drug use), (c) peers (e.g., friends who may advocate drug use), (d) the drugs themselves (e.g., are they seen as harmful or exciting?), and (e) drug treatment programs (e.g., are they seen as worthwhile or wasteful?). The attitude construct has achieved its preeminent position in research on social influence because of the assumption that a person's attitude was an important mediating variable between the acquisition of new knowledge on the one hand, and behavioral change on the other. For example, initial drug abuse prevention efforts were based on the view that providing the "facts" about drugs would lead to dislike of drugs and behavioral avoidance (Moskowitz, Malvin, Schaeffer, & Schaps, 1984; Wallack & Corbett, 1987).

Since the 1940s, numerous theories of attitude change and models of knowledge-attitude-behavior relationships have developed (see reviews by Chaiken & Stangor, 1987; Cooper & Croyle, 1984; Petty, Unnava, & Strathman, 1991). One of the earliest assumptions of theories of attitude change was that effective influence required a sequence of steps (e.g., McGuire, 1985; Strong, 1925). For example, typical influence models contend that a person first needs to be *exposed* to some new information. The goal of any strategy of influence, of course, is to reach as many people in the target audience as possible. This will likely involve multiple channels of communication—face-to-face, mass media, and community programs in schools, work sites, churches, and so forth. Second, people must *attend* to the information presented. Because there are literally hundreds of messages competing for attention each day, it is not surprising that few are successful in arousing it (cf. Bogart, 1967). A third issue concerns *reception*, or what from the information presented enters long-term memory. Just because a person is consciously aware of an informational presentation, there is no guarantee that any aspect of what is seen and heard will create more than a fleeting impression. Interestingly, recent research has suggested that nonusers of drugs may be more attentive to and can recall more information from anti-drug mass media campaigns than current users of drugs (Bozinoff, Roth, & May, 1989).

Nevertheless, just because some new information is learned as a result of an educational campaign, this does not assure that this knowledge will lead to attitude or behavior change. Current research strongly indicates that attitude change depends on the manner in which a persuasive message is idiosyncratically elaborated, evaluated, and *interpreted* so that it makes some psychological sense to the person. Information that is received may trigger thoughts, images, and ideas, that are favorable, unfavorable, or neutral, or the information may not produce any cognitive or affective responses. The more favorable the cognitive or affective response to the

information, the more likely that attitudes will change in a positive direction, but the more negative the cognitive or affective responses elicited, the more likely that attitudes will not change or will change in a direction opposite to that intended (cf. Greenwald, 1968; Petty, Ostrom, & Brock, 1981). Once the information received has elicited various thoughts and/or feelings, these must be *integrated* into an overall impression or evaluation which is then stored in memory (cf. Anderson, 1981). Only then is this overall evaluation or attitude capable of guiding subsequent *action*, the ultimate stage in the influence sequence (see Petty & Cacioppo, 1984).

Variants of this general information-processing model were often interpreted in theory and in practice as suggesting that a change early in the sequence would inevitably lead to a change later in the sequence. One problem with this reasoning is that the likelihood that a message will evoke each of the steps in the sequence may be viewed as a conditional probability. Thus, even if the likelihood of achieving each step in a campaign was 60%, the probability of achieving all six steps (exposure, attention, reception, interpretation, integration, and action), would be .6⁶, or only 5% (see McGuire, 1989).

A second factor, however, is that some of the steps in the sequence may be independent of each other. For example, although a person's ability to learn and recall new information (e.g., facts about specific drugs) was often thought to be an important causal determinant of and prerequisite to attitude and behavior change, little empirical evidence has accumulated to support this view (McGuire, 1985; Petty & Cacioppo, 1981). Rather, the existing evidence shows that message learning can occur in the absence of attitude change, and that people's attitudes may change in the absence of learning the specific information in the communication.

For example, Figure 5.1 diagrams the reactions of six different people to an anti-drug public service announcement presented on television. The campaign sponsors want young people to learn the message that using marijuana is dangerous because it can lead to use of hard drugs. The spot features a popular celebrity who tells about two of his friends who were seriously harmed by drugs. As depicted in the figure, Person A gets nothing from the message (and will not be considered further). Persons B, C, D, & E all understand the gist of the message and would pass a typical recall or comprehension test on the specifics of the communication. Importantly, current models of persuasion suggest that it is unlikely that one can judge the effectiveness of the campaign solely by examining the *knowledge* acquired from the communication. Rather, an individual's idiosyncratic elaborations and interpretations of the message are critical. Person B actively counterargues the message, thinking that the people described in the message are atypical. Person C thinks that the people in the message may be typical, but that he is unique and invulnerable to the threat.

	PERSON:					
	A	B	C	D	E	F
KNOWLEDGE:	none	Some people who use marijuana go on to use hard drugs and are therefore in DANGER of wasting their lives			CELEBRITY says to say no to drugs	
↓	↓	↓	↓	↓	↓	↓
COGNITIVE RESPONSES TO MESSAGE:	(irrelevant)	But few people are like this	Marijuana is dangerous to other people	Marijuana could be dangerous to me		The CELEBRITY disapproves of drug use
↓	↓	↓	↓	↓	↓	↓
ATTITUDE:		Message is irrelevant to me.		I like danger	I dislike danger	I like the CELEBRITY
↓	↓	↓	↓	↓	↓	↓
BEHAVIOR:				I might like drugs	I dislike drugs	I dislike drugs
↓	↓	↓	↓	↓	↓	↓
				POSSIBLE USE OF DRUGS	NON-USE OF DRUGS	

FIG. 5.1 Possible knowledge, beliefs, attitudes, and behavior of Persons A-F in response to a TV commercial featuring a celebrity who talks about two friends who used marijuana and went on to hard drugs and wasted their lives. Celebrity advocates "just say no."

Thus, both B and C dismiss the message as irrelevant to them, although for different reasons. Persons D and E have the initial response desired by the campaign sponsors. Both come to think that drug use could be dangerous to them. However, individual D likes danger and excitement (e.g., is a high sensation seeker; Zuckerman, 1983; see Donohew et al., this volume), and thinks that the drug might therefore be desirable. Person E, who shows the expected response of disliking danger, comes to dislike the drug (see Fishbein & Middlestadt, 1987, for further discussion of the role of idiosyncratic beliefs in influencing attitudes about drugs). The important point is that only one of the four people who processed the message and would pass a typical knowledge test showed attitude change in the desired direction. Finally, there is Person F who misses the point about the potential danger of drugs (and thus would fail the comprehension test), but does learn something—that the featured celebrity does not like drugs. Because Person F likes the celebrity, she also comes to dislike the drug men-

tioned in the ad. This result is expected by *balance theory* that states that people feel more comfortable when they agree with people they like, and disagree with people they dislike (Heider, 1958). Finally, note that Persons E and F have formed the same attitude, but as we explain later in the chapter, some attitudes have greater implications for behavior than others. That is, E's anti-drug attitude produces drug avoidance, but F's does not. In short, Fig. 5.1 demonstrates that: (a) attitude change can occur in the absence of the presumably critical knowledge (Person F), (b) the critical knowledge can be acquired without producing any attitude change (Persons B and C), (c) the same knowledge can lead to opposite attitudes (Persons D and E), and (d) attitudes that are ostensibly the same can have different implications for behavior (Persons E and F).

This analysis may help to explain why previous research on drug education has often found that knowledge change was insufficient for attitude and behavior change, or that attitude change was not followed by behavior change. For example, Goodstadt, Sheppard, and Chan (1982) evaluated an information-based program on alcohol. Students in the experimental program were exposed to 10 lessons that covered myths about alcohol, information about advertising, reasons for drinking, and the effects of alcohol on the family, driving, sports, fitness, and sexuality. When compared with students in a control program who received no drug education, students in the experimental program showed greater knowledge about alcohol but failed to show any significant change in attitudes. After an extensive review of drug and alcohol education programs, Kinder, Pape, and Walfish (1980) concluded that although programs were typically successful in increasing participants' knowledge about drugs, there was very little evidence that they were successful in changing attitudes and behavior (see also Rundall & Bruvold, 1988).

Two Routes to Persuasion

Current psychological theories of influence focus on how and why various features of a persuasion situation (i.e., aspects of the source, message, channel, context, and recipient) affect each of the steps in the communication sequence (e.g., how does the credibility of the source affect attention to the message?). The most work by far, however, focuses on how variables affect the *interpretation* stage of information processing. This stage is sometimes viewed as the most critical because it is during this stage that the message achieves some meaning, is evaluated favorably or unfavorably, and is accepted or rejected.

According to the Elaboration Likelihood Model (ELM) of Persuasion, the processes that occur during the interpretation stage can be thought

of as emphasizing one of two relatively distinct "routes to persuasion" (see Petty & Cacioppo, 1981, 1986). The first, or *central route*, involves effortful cognitive activity whereby the person draws on prior experience and knowledge to carefully scrutinize and evaluate the issue-relevant arguments presented in the communication (whether it appears in the mass media, comes from a friend, parent, or teacher). In order for this to occur, the person must possess sufficient motivation, ability, and opportunity to process the perceived merits of the information provided. The end result of this processing is an attitude that is well articulated and integrated into the person's belief structure. Attitudes changed by this route have been found to be relatively persistent, predictive of behavior, and resistant to change until they are challenged by cogent contrary information (see Petty & Cacioppo, 1986).

In addition, the more practice a person has in thinking about and defending a newly acquired anti-drug attitude, the more likely the person is to resist the challenges the new attitude surely will face. In his *inoculation theory*, McGuire (1964) used a biological analogy to suggest that just as people can be made more resistant to a disease by giving them a mild form of the germ, people can be made more resistant to attacks on their attitudes by inoculating their new opinions. The inoculation treatment consists of exposing people to a few pieces of attacking information and showing them how to refute it. Research clearly indicates that people whose attitudes are bolstered with inoculation treatments become less vulnerable to subsequent attacks on their attitudes than people whose attitudes are bolstered with supportive information alone (e.g., McGuire, 1964).

In stark contrast to the central route approach, some theories of persuasion do not place much credence on the arguments in a message or issue-relevant thinking. Instead, they postulate a *peripheral route* whereby simple cues in the persuasion context either elicit an affective state (e.g., happiness) that becomes associated with the advocated position (as in classical conditioning; Staats & Staats, 1958), or trigger a relatively simple inference or heuristic that a person can use to judge the validity of the message (e.g., Chaiken, 1987). Public service announcements (PSAs) attempt to employ this strategy when they rely on a well-liked celebrity or sports figure to induce attitude change rather than focusing on the merits of the arguments that are presented. We do not mean to suggest that peripheral approaches are necessarily ineffective. In fact they can be quite powerful in the short term. The problem is that over time, peoples' feelings about celebrities and sports figures change, the positive sources may become dissociated from the message, and normative sources of influence become less important as one grows older. Laboratory research has shown that attitude changes based on peripheral cues tend to be less persistent and resistant to subsequent pressures. Thus, people who hold anti-drug atti-

tudes based solely on celebrity cues are less likely to resist arguments and pressure to use drugs than are people who have developed negative attitudes toward particular drugs after careful reflection on the personal dangers inherent in their use (see Persons E and F in Fig. 5.1).

In summary, attitudes changed via the central route tend to be based on active thought processes resulting in a well-integrated cognitive structure, but attitudes changed via the peripheral route are based more on passive acceptance (or rejection) of simple cues and have a less well-articulated structure. Figure 5.2 outlines two possible cognitive structures for the same information about drugs. The person represented in the top panel of the figure has an organized schema about drugs. When a drug is mentioned, the person easily is able to retrieve a negative attitude and the beliefs upon which this attitude is based. For the person represented in the bottom panel, however, thoughts and feelings about drugs are scattered throughout memory and are not likely to be highly accessible when a drug is mentioned. Rather, the information is organized around salient celebrity cues. This depiction makes it clear that although both the central and peripheral routes may produce similar amounts of attitude change initially, the structure of the attitudes may differ dramatically.

Our discussion of the central and peripheral routes to persuasion indicates that active participation in the persuasion process is critical to producing stable attitude changes that are influential in behavior and are resistant over time. Importantly, the trend in the 1980s in drug prevention programs was to incorporate a greater degree of active participation and "inoculation" by having participants discuss personal values with respect to drugs, actively question the information provided, and role play scenarios in which drugs are refused (Botvin, Baker, Renick, Filazzola, & Botvin, 1984; DeJong, 1987; Moskowitz et al., 1984). For example, Duryea (1983) exposed students to exercises in which they were confronted with several pro-drinking arguments and were shown how to refute them. When compared with a control group, the inoculation subjects were more likely to successfully refute pressure to participate in drinking and risky behavior when confronted with a hypothetical persuasion scenario in a classroom setting (see also, DuPont & Jason, 1984).

One program that is worthy of special note due to its commitment to creating an environment that fosters participants' active participation is the Alcohol and Substance Abuse Prevention Program developed at the University of New Mexico (Wallerstein & Bernstein, 1988). In this program, participants are provided with direct experience with the consequences of drugs by having them visit hospitals, jails, emergency rooms, and the like. The participants are responsible for seeking out information by developing their own questions, identifying problems that they see at various levels of societal and personal importance, relating the informa-

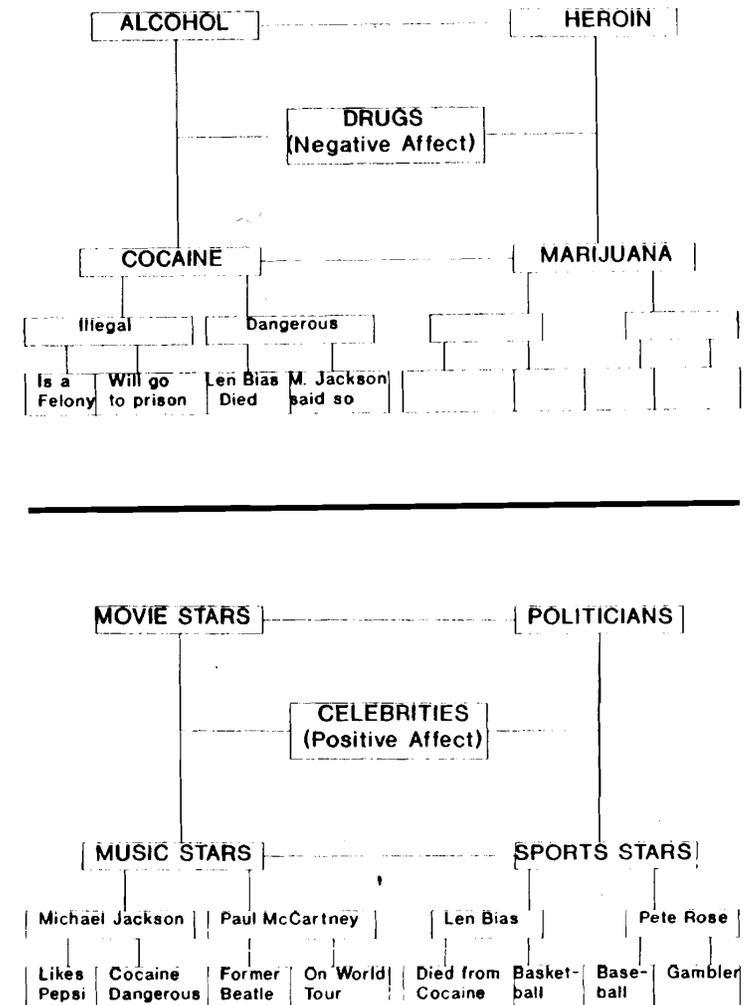


FIG. 5.2 Alternative cognitive schemas for information about drugs. Top panel presents a well-integrated drug schema. Bottom panel presents a poorly integrated one.

tion and experiences to their own lives, and thinking about what can be done in order to deal with these problems in their own lives and in the community.

The Role of Specific Variables in the Elaboration Likelihood Model

Our discussion of the two routes to persuasion so far highlights two ways in which variables can have an impact on persuasion. Variables may serve as persuasive *arguments*, providing information as to the central merits of an object or issue, or they may serve as simple *cues*, allowing favorable or unfavorable attitude formation in the absence of a diligent consideration of the true merits of the object or issue. Two other ways in which a variable can have an impact on persuasion are by affecting (a) the *extent of argument elaboration* (i.e., the intensity with which the person thinks about and evaluates the central merits of the issue-relevant information presented), and (b) the *direction of any bias in elaboration* (i.e., are the thoughts biased in a positive or negative direction; Petty & Cacioppo, 1990).

The ELM holds that as the likelihood of elaboration is increased (whether thinking about the arguments proceeds in a relatively objective or a more biased fashion), the perceived *quality* of the issue-relevant arguments presented becomes a more important determinant of persuasion. As the likelihood of elaboration is decreased, however, peripheral cues become more important. That is, when the elaboration likelihood is high, the central route to persuasion dominates, but when the elaboration likelihood is low, the peripheral route takes precedence. The accumulated research on persuasion has pointed to many variables that can be employed to either increase or decrease the amount of thinking about a persuasive message. Some variables, such as the perceived personal relevance of the communication (Petty & Cacioppo, 1979b) and an individual's level of "need for cognition" (Cacioppo & Petty, 1982) determine one's overall *motivation* to process issue-relevant arguments. Other variables, such as the extent of message repetition (Cacioppo & Petty, 1989) or the nature of any distractions present (Petty, Wells, & Brock, 1976) determine a person's overall *ability* to process issue-relevant arguments. It is also important to note that some variables affect information processing activity in a relatively objective manner, whereas others may introduce a systematic bias to the information-processing activity. For example, telling a highly involved audience that a message is specifically attempting to persuade them motivates active resistance and counterarguing (Petty & Cacioppo, 1979a).

One of the most important features of the ELM is that it holds that any one variable can serve in each of the roles outlined here, although in

different situations. That is, a variable can serve as a persuasive argument in some contexts, act as a peripheral cue in others, and affect the intensity of thinking or the direction of processing bias in still other domains. For example, in separate studies, the attractiveness of a message source has (a) served as a simple peripheral cue when it was irrelevant to evaluating the merits of an attitude object and subjects were not motivated to process the issue-relevant arguments, (b) served as a message argument when it was relevant to evaluating the merits of the attitude object and the elaboration likelihood was high, and (c) affected the extent of thinking about the message arguments presented when the elaboration likelihood was moderate (see Petty & Cacioppo, 1986, for a review).

If any one variable can influence persuasion by several means, it becomes critical to identify the general conditions under which the variable acts in each of the different roles. The ELM holds that when the elaboration likelihood is high (such as when perceived personal relevance and knowledge are high, the message is easy to understand, no distractions are present, etc.), people typically know that they want and are able to evaluate the merits of the arguments presented and they do so. Variables such as source attractiveness have little direct impact on evaluations by serving as simple cues in these situations. Instead, they may serve as arguments if relevant to the merits of the issue, or may bias the nature of the ongoing cognitive activity. On the other hand, when the elaboration likelihood is low (e.g., low personal relevance or knowledge, complex message, many distractions, etc.), people know that they do not want and/or are not able to evaluate the merits of the arguments presented (or they do not even consider exerting effort to process the message). If any evaluation is formed under these conditions, it is likely to be the result of relatively simple associations or inferences. Finally, when the elaboration likelihood is moderate (e.g., uncertain personal relevance, moderate knowledge, moderate complexity, etc.), people may be uncertain as to whether or not the message warrants or needs scrutiny and whether or not they are capable of providing this analysis. In these situations they may examine the persuasion context for indications (e.g., is the source credible?) of whether or not they are interested in or should process the message.

An example might help to clarify the multiple roles that a variable can have in different situations. Consider the effect of a person's mood on persuasion. If the elaboration likelihood is very low, such as when a message is very low in perceived personal relevance, positive mood would be capable of serving as a simple cue, rendering people more positive toward whatever view is presented. On the other hand, if the elaboration likelihood is very high and people are clearly motivated and able to think about the arguments presented, positive mood should increase the likelihood that positive thoughts are accessed during processing. Finally, if the message

is of uncertain relevance and people must decide whether or not to devote effort to thinking about the message, they may decide not to think about it if in a positive mood because of concern that thinking about the message will destroy their current good feeling (e.g., why think about a depressing drug message if you are in a good mood?; see Petty, Gleicher, & Baker, 1991, for further discussion).

Because any one variable can produce persuasion in multiple ways, it is important to understand *why* the variable has worked. For example, our discussion of the two routes to persuasion suggests that if a good mood has produced persuasion by serving as a simple cue under low elaboration conditions, the attitude induced will be less persistent, resistant, and predictive of behavior than if a good mood produced the same amount of persuasion, but worked by increasing positive thoughts to the message arguments under high elaboration conditions. In empirical research on drug abuse prevention, many source, message, recipient, and contextual variables have been examined, but little attention has been paid to the processes by which these variables work (cf. McCaul & Glasgow, 1985). For example, several studies have compared the effectiveness of peer-led prevention programs with those led by teachers (e.g., Botvin et al., 1984; Smart, Bennett, & Fejer, 1976). Unfortunately, in some of these studies the source was confounded with the nature of the message presented, and overall there has been little consistency in results indicating whether one type of source was more effective than another. The ELM holds that source, message, recipient, and contextual factors can work by different processes in different situations, and that the process is critical. Thus, even if previous research had shown that peers were more effective than teachers overall, it would be important to know if this was because a peer source was serving as a simple positive cue, or if peers enhanced attention to and processing of the substantive arguments presented.

Attitude-Behavior Links

Once a person's attitude has changed (e.g., has moved from pro- to anti-drug), it is important that the new attitude rather than old habits guide behavior. Considerable research has addressed the links between attitudes and behavior and a number of situational and dispositional factors have been shown to enhance the consistency between them. For example, attitudes have been found to have a greater impact on behavior when: (a) the attitudes in question are consistent with underlying beliefs, (b) the attitudes are based on high rather than low amounts of issue-relevant information and/or personal experience, (c) the attitudes were formed as a result of considerable issue-relevant thinking, and (d) cues in the situation indi-

cate that the person's attitude is relevant to the behavior (see Ajzen, 1988, for a comprehensive review).

Two general models of the process by which attitudes guide behavior have achieved widespread acceptance. One type is exemplified by Ajzen and Fishbein's (1980) "theory of reasoned action," which assumes that "people consider the implications of their actions before they decide to engage or not engage in a given behavior" (p. 5). In this model, people are hypothesized to form intentions to perform or not to perform behaviors, and these intentions are based on the person's attitude toward the behavior as well as perceptions of the opinions of significant others (norms). The model focuses on the relatively thoughtful processing involved in considering the personal costs and benefits of engaging in a behavior. In particular, the model focuses on the perceived likelihood that certain benefits will be obtained or costs avoided, and the desirability (aversiveness) of those benefits (costs). The specific beliefs that are relevant to health-related actions have been outlined in the Health Belief Model (Rosenstock, 1974) and include beliefs about: (a) one's personal susceptibility to some negative condition (e.g., Will I become addicted if I take drugs? Will I experience withdrawal if I stop?), (b) the perceived severity of the condition, (c) the subjective benefits of engaging in a recommended action, and (d) the costs (financial, psychological, etc.) of the action. That is, people are assumed to engage in health-related actions (e.g., stopping smoking, avoiding drugs) to the extent that they believe that some health concern is serious, relevant to them, and the likely effectiveness and other benefits of the recommended action outweigh its costs. Although a number of studies have raised challenges to some of the specifics of the reasoned action and health-belief models, these frameworks have proven remarkably successful in accounting for a wide variety of behavior (see Janz & Becker, 1984; Sheppard, Hartwick, & Warshaw, 1988). As noted earlier, of course, this reasoned action approach is only applicable when people are sufficiently motivated and able to engage in a cognitively demanding cost-benefit analysis of some action.

In contrast to these theories of *reasoned* action, Fazio (1990) has proposed that much behavior is rather spontaneous and that attitudes can guide behavior by a relatively automatic process. Specifically, Fazio argued that attitudes can guide behavior without any deliberate reflection or reasoning if (a) the attitude is accessed (comes to mind) spontaneously by the mere presence of the attitude object; and (b) the attitude colors perception of the object so that if the attitude is favorable (or unfavorable), the qualities of the object appear favorable (or unfavorable). For example, when a drug abuser is confronted with cocaine, positive feelings based on past experience may come to mind automatically and cause the person to take the drug. The various costs and benefits of use may not be considered at all, or may be weighed only long after the drug is taken.

Fazio (1990) noted that motivational and ability factors will be important in determining whether the reasoned action or the automatic activation process occurs. That is, for behavioral decisions that are high in perceived personal consequences, attitudes are likely to guide behavior by a deliberate reflection process, but when perceived consequences are low, spontaneous attitude activation should be more important. Similarly, as the time allowed for a decision is reduced, the importance of spontaneous attitude activation processes should be increased over more deliberative processes. A teenager at a party who is confronted with likable peers who advocate drug use in a noisy environment with limited time for decision making, is not likely to engage in much cogitation. Rather, simple salient positive cues are likely to guide choices unless anti-drug attitudes are well ingrained and highly accessible.

BEHAVIORAL INFLUENCE VIA SOCIAL LEARNING

In some domains an accessible attitude is easily translated into behavior (e.g., I like Candidate X, I will vote for this candidate in the upcoming election). In other domains, however, translating new attitudes into new behaviors is rather complex even if the person has the desire to act on the attitude. In the area of drug abuse, attitude change, although an important first step, may be insufficient to produce the desired behavioral responses. People may also need to acquire new skills and self-perceptions that allow newly acquired attitudes and intentions to be translated into action. Furthermore, once an attitude has yielded new behavior, this new behavior may not persist in the absence of incentives. Bandura's (1977, 1986) social (cognitive) learning theory provides a framework to understand these processes.

Like the central route approaches to persuasion described earlier, the social learning perspective views voluntary behavior as determined in part by the personal consequences that a person anticipates for various courses of action (Rosenstock, Strecher, & Becker, 1988). These consequences (rewards and punishments) may be anticipated because of prior personal experience, the observed experiences of others, or they may be expected simply as a result of cognitive reasoning processes.

According to social learning theory, producing behavior change may require that a person learns new actions (skills) or new sequences of already acquired actions. For example, a person may have developed a negative attitude toward drugs, but does not have the verbal skills to say no

when under pressure.¹ Learning of new skills may occur via direct experience or by observing the behavior patterns of others (modeling). The most effective models are those people who are most similar to the target of influence or are people with whom the target identifies or admires. An important aspect of Bandura's social (cognitive) learning framework is the idea that people do not always behave optimally, even though they know the "correct" behaviors and have positive attitudes toward them. That is, people are not always motivated to translate their acquired skills into action.

One particularly important cognitive determinant of whether people's skills are put into action concerns people's assessments of their own capabilities or their judgments of *self-efficacy* or competence (Bandura, 1982). Judgments of self-efficacy are important because considerable research indicates that the higher the level of perceived efficacy, the more likely people are to persist in a new behavior that has been learned. Of the various ways to influence self-efficacy, providing guided practice and specific skills training have proven to be particularly powerful techniques (cf. Myer & Henderson, 1974).

A drug education program that incorporates elements of social learning theory along with the principle of active participation described previously is Project DARE (Drug Abuse Resistance Education; see DeJong, 1987). This program, which began as a joint activity of the Los Angeles Police Department and the Los Angeles Unified School District, has police officers lead sixth-grade students through a 17-session prevention program designed to help them recognize and resist the peer pressure that often leads to drug experimentation. Some sessions focus on providing information about the hazards of drug use and others incorporate inoculation techniques. Importantly, participants spend time practicing various resistance techniques through role-playing scenarios and engage in exercises aimed at building self-efficacy, assertiveness, and mature decision-making processes.

IMPLICATIONS OF THEORETICAL PERSPECTIVES FOR CHANGING ATTITUDES ABOUT DRUGS

Although considerable work has shown that it is possible to change people's knowledge about drugs, we have seen that these knowledge differences do not invariably turn into attitude and behavior change. Our brief

¹Much of the work conducted within the social learning framework has focused on people who already want to change their behavior (e.g., snake phobics; people who want to change their diet as a result of having high cholesterol), and thus the initial attitude change process is not emphasized, because it has presumably occurred already.

review of basic theory and research has emphasized that information will only be successful in changing attitudes and behavior if people are motivated and able to process the information presented, and this processing results in favorable cognitive and affective reactions. Furthermore, once attitudes have changed, implementation of change may require learning new behavioral skills and perceptions of self-efficacy. Thus, current work on attitude and behavior change may help to account for some unsuccessful translations of anti-drug knowledge and/or attitudes into anti-drug behaviors. First, the anti-drug knowledge acquired may have been seen as irrelevant by the recipients, or may have led to unfavorable rather than favorable reactions. Second, even if positive attitude changes were induced, the changes may have been based on simple peripheral cues rather than elaborative processing of the message. Third, even if attitude changes were produced by the central route, the people influenced may have lacked the necessary skills or self-confidence to translate their new attitudes into action.

Perhaps the most important issue raised in our review is that although some attitudes are based on a careful reasoning process in which externally provided information is related to oneself and integrated into a coherent knowledge structure, other attitudes are formed as a result of relatively simple cues in the persuasion environment. Although both types of processes can lead to attitudes similar in their valence (how favorable or unfavorable they are), there are important consequences of the manner of attitude change. Because the goal of persuasion-based programs on drugs is to produce long-lasting changes in attitudes with behavioral consequences, the central route to persuasion appears to be the preferred influence strategy. Unfortunately, this is not simple. The recipient of the new information must have the motivation, ability, and opportunity to process the new information. As noted previously, one of the most important determinants of motivation to think about a message is the perceived personal relevance of that message. When personal relevance is high, people are motivated to scrutinize the information presented and integrate it with their existing beliefs, but when perceived relevance is low, messages may be ignored or processed for peripheral cues. Many people in the population may feel that anti-drug messages are not relevant to them or have few consequences for them. An important goal of any drug education strategy will be to increase people's motivation to think about anti-drug messages by increasing the perceived personal relevance of these messages.

Even if people were motivated to attend to and think about anti-drug messages, it is critical that people respond to these messages with favorable cognitive and affective reactions. It is likely that different types of information will be responded to favorably by different segments of the population. Considerable research is needed on the level of complexity to present

to different audiences, and the type of information that when presented will elicit favorable thoughts and implications.

Finally, even if the appropriate attitudes are changed, a new attitude cannot influence behavior if it does not come to mind prior to the opportunity for behavior, or if people lack the necessary skills or confidence to implement their new attitudes. For example, if a person has recently come to the conclusion that crack cocaine should be avoided and has formed an appropriate negative attitude, this does no good if the negative attitude is not accessible when confronted with the drug. The new negative attitude might be retrievable, but only if cues in the environment provoke reflection. People will need to be encouraged to think before they act so that their *new* attitudes rather than old habits or salient situational cues are accessed. As noted previously, people will also need to acquire the behavioral skills to implement their new attitudes.

Alternatively, a person may have formed a tentative negative attitude toward some drug, but if the person's exploratory drug experience is positive, two contrary attitudes are formed—"this drug is supposed to be bad" and "this drug makes me feel good." Because beliefs and attitudes based on direct experience come to mind more readily than attitudes that are based solely on externally provided information, the effectiveness of the anti-drug attitude is at a competitive disadvantage (Fazio & Zanna, 1981). To the extent that these effects are anticipated, prevention programs can incorporate role-playing and other direct experiences in which students receive practice in dealing with these contrary feelings, should they arise.

In summary, we note that research on social influence has come a long way from the early notion that providing anti-drug information alone was sufficient to influence behavior. Social influence is a complex, although explicable process. We now know that the extent and nature of a person's cognitive responses to external information may be more important than the information itself. We know that attitudes can be changed in different ways (central vs. peripheral routes), and that some attitude changes are more stable, resistant, and predictive of behavior than others. We also know that even apparently simple variables (such as how likable a source is or what mood a person is in) can produce persuasion by very different processes in different situations. We hope our brief review of current thinking about attitude change processes may have some utility for developing and evaluating anti-drug communications.

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