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Persuasion Theory and Drug Abuse Prevention

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One of the major agendas issued by politicians and the mass media at the beginning of the '90s has been the declaration of a "war on drugs." One component of this war involves the increasing expenditure of tax dollars on law enforcement targeted at stopping the criminal *supply* side of the drug problem. The other component of this equation involves the *demand* side. Currently, considerable money and time are spent on public education programs focused on increasing knowledge about the dangers of drug use. For example, the U.S. government has sponsored multimedia antidrug campaigns (e.g., National Institute on Drug Abuse's "Cocaine: The Big Lie"; see Forman & Lachter, 1989). In addition to increasing knowledge about drugs, the goals of these drug programs include the changing of personal attitudes and behavior regarding drug use and abuse.

Some drug abuse and prevention programs are incorporated within the public education curriculum in order to teach adolescents about the risks and dangers of getting involved with drugs. The primary purpose of these programs is to curtail or postpone the onset of drug use. One such drug abuse prevention program, Project DARE (Drug Abuse Resistance Education), is conducted by local police officers and attempts to influence adolescents to reject drugs by providing them with an intensive drug education program organized into 17 lessons. A recent evaluation of this program suggests that there is at least moderate success in reducing the amount of alcohol, cigarettes, and other drugs used by its graduates (DeJong, 1987).

The purpose of this article is to describe briefly a psychological framework for understanding the processes responsible for persuasion and to note its implications for changing attitudes about drugs. This framework helps to explain why relatively modern programs, such as DARE, provide more encouraging evidence for successful drug abuse prevention over traditional methods of drug education.

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In addition, the article raises issues that future prevention programs might consider (see also Petty, S. M. Baker, & Gleicher, 1991).

Social scientists concerned with the study of human influence have focused on the concept of attitudes or peoples' general predispositions to evaluate *attitude objects* on a valenced (positive to negative) continuum. The attitude construct has gained its importance in social influence research due to the assumption that one's attitude serves a mediating role between the acquisition of new knowledge and any ensuing behavioral change. It has been widely accepted that knowledge, attitudes, and behavior are linked in a causal chain (cf. McGuire, 1981). Therefore, the assumption underlying traditional drug prevention campaigns was that if one provided the negative facts about drugs, one could instill an unfavorable attitude toward illicit drugs in the target population, and ultimately prevent the use of these illicit substances (e.g., Moskowitz, Malvin, Schaeffer, & Schaps, 1984; Wallack & Corbett, 1987).

COMPLEXITY OF ATTITUDES RELATING TO INFLUENCE SETTINGS

In contrast to the assumptions guiding early prevention programs, research in social psychology has shown conclusively that creating effective persuasive messages is more complex than merely providing factual information. First, there are more attitudes that are relevant to the demand and use of illicit drugs than one's attitude toward the drug itself. For example, among the attitudes relevant to the 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 advise against drug use), (c) peers (e.g., friends who may encourage drug use), and (d) drug treatment programs (e.g., the perception of them as worthwhile or wasteful). Thus, it is overly simplistic to focus solely on the knowledge that one has about various drugs in hopes of changing peoples' behaviors with respect to drug use in general.

Second, even if one's attitude toward the drug itself were the only attitude relevant to behavior, there are other variables that determine whether attitudes guide behavior. Among these variables are whether (a) the person is committed to the attitude, (b) the attitude is accessible in the behaviorally relevant situation, (c) the person has the necessary skills to implement the attitude, and (d) others (see Ajzen, 1989; Bandura, 1982; Fazio, 1990).

THE KNOWLEDGE-ATTITUDE LINK AND ATTITUDE CHANGE PROCESSES

In addition to the complexity of an individual's cluster of attitudes as they pertain to the possible aspects of drug use and the related difficulties in achieving attitude-consistent behavior, it is important to consider the processes underlying attitude change. After all, the purpose of drug prevention programs is to produce nega-

tive attitudes toward the use of drugs through the dissemination of information. Prevention programs therefore provide an important arena in which numerous theories of attitude change and models of knowledge-attitude-behavior relationships are applicable (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). The initial step involved *exposure* to the relevant information. The goal of any strategy of influence is to reach as many people in the target audience as possible. Second, for influence to be successful, the targeted audience must *attend* to the information in the message. The likelihood of any message successfully receiving attention is reduced by the sheer number of messages people are inundated with each day. A third issue concerns *reception* or what information from the message 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 momentary impression.

As empirical evidence from various drug prevention program evaluations illustrates (Green & Kelley, 1989; Kinder, Pape, & Walfish, 1980; Rundall & Bruvold, 1988), just because some new information is learned as a result of a drug prevention program, this knowledge does not invariably lead to attitude or 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.

Current research strongly indicates that the extent and nature of attitude change depends on the manner in which a persuasive message is idiosyncratically elaborated, evaluated, and interpreted so that it makes some sense to the individual. 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. However, in the event that predominantly negative cognitive or affective responses are elicited, it is more likely that attitudes will not change or will change opposite to the direction intended (cf. Greenwald, 1968; Petty, Ostrom, & Brock, 1981). Once the information received has elicited this elaboration, these responses must be integrated into an overall impression or evaluation that 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).

Considering that there are multiple attitudes relevant to drug use and that there

are many stages involved in processing a message, the resulting implication is that the persuasion context is much more complicated than the simple dissemination of factual information about the dangers and risks of drugs. The contribution of attitude theory to drug education is twofold. First, theory is instructive in terms of producing greater understanding of the variables that may potentially maximize the effectiveness of a prevention campaign on a given target audience.

Second, theory helps to identify the weaknesses and faulty assumptions on which some previous attempts have been based. This reconsideration may lead to a more optimistic view of the potential benefits accrued from the institution of drug prevention programs than can currently be concluded from various unsuccessful programs. For example, as mentioned previously, traditional drug programs assumed that if individuals learned the information contained in the message, they would integrate this new information into their beliefs, and this would produce consistent attitudes and behaviors. Unfortunately, many of these prevention programs were successful at changing the knowledge people had about drugs yet had no impact on the attitudes and behaviors relevant to drug use. Current research suggests that the failure of some drug prevention programs may be due in part to the fact that the postulated stages in the attitude change sequence may be independent of each other. For example, existing evidence suggests that message learning can occur in the absence of attitude change and, conversely, that people's attitudes may change in the absence of learning the specific information in the communication.

It may be useful to illustrate how these disparate reactions can occur by examining six possible individual reactions to a hypothetical antidrug message presented as a public service announcement 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 Figure 1, Person A gets nothing from the message and will not be considered further. Persons B, C, D, and E all understand the gist of the message and would pass a typical knowledge 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 information acquired from the communication. Rather, as noted previously, an individual's idiosyncratic thoughts in response to the message are critical. For example, 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. Thus, both B and C dismiss the message as irrelevant to them, though 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, Person D likes danger and excitement and thinks that the drug might therefore be desirable. Person E, who shows the expected response of disliking danger, comes to dislike the drug. The

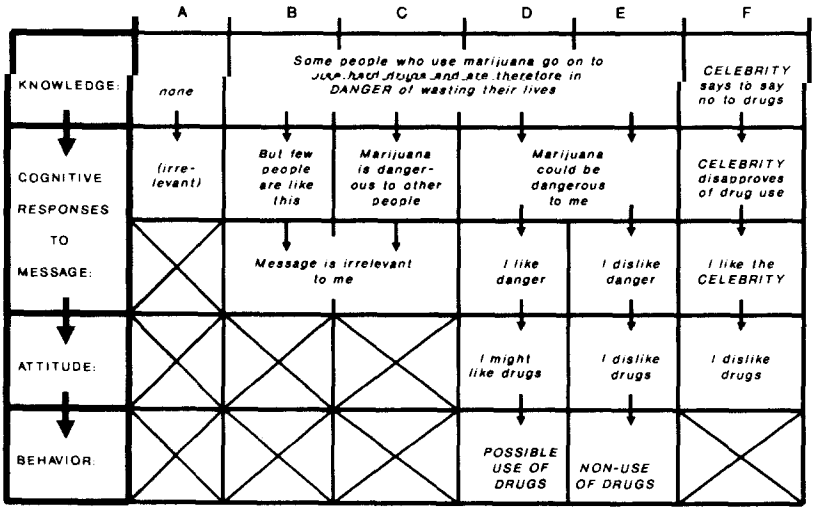

FIGURE 1 Possible knowledge, beliefs, attitudes, and behavior in response to a TV commercial featuring a celebrity who talks about two friends who used marijuana, went on to hard drugs, and wasted their lives. The celebrity advocates, "just say no" (adapted from Petty, Baker, & Gleicher, 1991).

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 mentioned in the ad. This result is expected by *balance theory*, which 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 will be explained shortly, it is likely that E's thoughtfully formed antidrug attitude produces drug avoidance, whereas F's peripheral attitude does not.

To summarize the implications of Figure 1:

1. Attitude change can occur in the absence of the presumably critical knowledge (Person F).
2. Presumably critical knowledge can be acquired without producing any attitude change (Persons B and C).
3. Acquisition of the same knowledge can lead to opposite attitudes (Persons D and E).
4. Attitudes that are ostensibly the same can have different implications for behavior (Persons E and F).

INTEGRATION OF MODERN PREVENTION PROGRAMS AND BASIC THEORY: PROJECT DARE

Now that the complexity of the persuasion context has been illustrated by highlighting possible flaws in the assumptions of some traditional prevention programs, attention can be focused on the potential advances in modern prevention programs gained through the application of current social influence theory. Project DARE will serve as a specific example of a current prevention program that incorporates a variety of features deemed important by current social influence theory.

Project DARE began as a joint program of the Los Angeles Police Department and the Los Angeles Unified School District. As noted previously, the program has police officers lead sixth graders through a 17-session prevention program designed to help them recognize and resist peer pressure that often leads to drug experimentation. The program contains several different methods for increasing the likelihood of producing attitudes and behaviors that result in the rejection of drug use. Currently, Project DARE is widely instituted across the country and is being experimentally extended to the high school setting.

Some DARE sessions focus on the dissemination of information about the hazards and consequences of drug use (informational campaign). In other sessions, officers explain different types of pressures that the media and peers may use in persuasion attempts to use drugs. Then, participants spend time practicing various resistance techniques through role-playing scenarios. Sessions also focus on building self-esteem, assertiveness, and mature decision-making processes that promote self-interest. Participants make a public commitment to resist drugs by composing and reading aloud essays about how the participant would respond to social pressures to use drugs. Finally, participants are rewarded for their active participation in the program by receiving certificates of achievement during a school-wide assembly.

Project DARE demonstrates with moderate success a number of issues addressed by theories of social influence (see Clayton, Cattarello, & Walden's, this issue, discussion of DARE). First, it can be seen that the DARE program incorporates the notion that there are many more attitudes relevant to the prevention of drug use than merely one's knowledge and attitude about the illicit drug itself. Attention is given to the bolstering of self-esteem and assertiveness, the role of peers in the influence of drug use, and so on.

In terms of the processes underlying the changing of attitudes about illicit drug use, current theories of social influence suggest that the *interpretation* stage of information processing is the most critical because it is at this stage that the message achieves some meaning, is evaluated favorably or unfavorably, and is accepted or rejected. Basically, the processes underlying attitude change in the interpretation stage (illustrated in Figure 1) can be characterized as emphasizing one of two routes to persuasion (Petty & Cacioppo, 1981, 1986). The first, or *central route*, is characterized by the deliberate, effortful examination of the in-

formation presented in the message. The person may draw on prior experience and knowledge to scrutinize and evaluate the information carefully. For the person to scrutinize the message successfully, the person must both be able to process the information (e.g., have ample time, the appropriate intellectual level, etc.) and be motivated to process (e.g., view the message as personally relevant, interesting, etc.). If the person, through careful scrutiny, finds merit in the information, it is likely that attitude change will occur in the direction advocated by the message. This change in attitude is likely to be relatively accessible, persistent, predictive of behavior, and resistant to change until challenged by cogent contrary information (see Petty & Cacioppo, 1986). In the DARE curriculum, there is an emphasis on taking time to examine thoughtfully the information provided. Students are encouraged to ask questions during sessions and to write their own essays in which they express their attitudes toward drug use.

Another variable that influences the stability of newly formed antidrug attitudes is the amount of practice the person has thinking about and defending this new position from attack. It is often the case that one's attitudes, especially concerning the rejection of drug use, will likely be subject to counterpersuasion by peers or others. 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. Again, Project DARE includes a variety of inoculation type sessions in which students practice rejecting persuasive attempts by peers. Students both imagine and role play refusal strategies in hypothetical influence scenarios. Other evidence supporting the success of inoculation training in the resistance to drug use pressures is offered by Duryea, Ransom, and English (1990).

The level of personal involvement that the prevention programs are able to elicit from the participants has been identified as a variable that may facilitate the development of thoughtful negative attitudes toward drugs and corresponding behavior change. The trend in drug education through the 1980s has been to incorporate a greater degree of active involvement by having participants discuss personal values with respect to drugs, actively question the information provided, role play scenarios in which drugs are refused, and participate in various activities developed in order to enhance individuals' self-esteem (G. J. Botvin, E. Baker, Renick, Filazzola, & E. M. Botvin, 1984; DeJong, 1987; Moskowitz, Malvin, Schaeffer, & Schaps, 1983, 1984). This greater personal involvement increases thoughtful persuasion by increasing a person's motivation to think about the information provided.

In contrast to the central route approach, some theories of persuasion do not

place much credence on the merits of the information presented or issue-relevant thinking. Instead, they postulate a *peripheral route* whereby simple cues in the persuasion context either elicit an affective state (as in classical conditioning; e.g., see Staats & Staats, 1958) or trigger a relatively simple inference or heuristic that a person can use to judge the message (e.g., "I like you, so I'll agree with you"; cf. Chaiken, 1987). Public service announcements 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 information presented. These attempts can be quite powerful in the short term. The problem is that, over time, people's feelings about celebrities and sports figures change, the positive sources may become dissociated from the message, and normative sources of influence may become less important as one grows older. Also, even if the attitude toward the source persists over time and remains associated with the message, another liked or credible source may advocate the opposite behavior, and the person will be unable to defend his or her initial opinion. Laboratory research has shown that attitude change based on peripheral cues tends to be both less persistent and resistant to subsequent pressures (Petty & Cacioppo, 1986). Thus, people who hold antidrug attitudes based solely on celebrity cues are less likely to resist arguments and pressure to use drugs than are those who have developed negative attitudes toward particular drugs after careful reflection on the negative consequences inherent in their use (cf. Persons E and F in Figure 1).

Our discussion of the two routes to persuasion highlights two ways in which variables, such as the source of the message, 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., as when thoughts are biased in a positive or negative direction; see Petty & Cacioppo, 1986).

Research has focused on the effectiveness of various source, message, recipient, and channel variables that serve in these roles. In drug prevention research, the source of the antidrug message (e.g., health expert, peer, police officer, teacher, etc.) has been identified as a potentially important variable in the success of the program. Various studies have compared the effectiveness of peer-led prevention programs with programs led by teachers (G. J. Botvin et al., 1984), but it is not always clear why some sources are more effective than others. Sources can vary on several dimensions (e.g., credibility, trustworthiness, expertise, attractiveness, and similarity to the message recipient), and sources can serve several different functions in the persuasion process. For example, the use of police officers in the DARE program might serve several possible roles. First, the police

officer might serve as a simple cue as to the validity of the message (e.g., "If a police officer said it, it must be true"). Alternatively, as a figure of authority, the police officer might serve as a potent informational reminder of the unlawfulness of drug use and the criminal sanctions against it. A third possibility is that the officers, as credible authority figures, may enhance the extent of message processing. Students may be more curious about what a police officer has to say than their regular classroom teacher. Finally, it is possible that having a message presented by a police officer might lead to biased rather than relatively objective processing. That is, students may be motivated to elaborate the message in a favorable manner even if the information presented is weak.[1] Whether the persuasion process induced by presentation of a message by a police officer is thoughtful or cue based is important because of the differential consequences of the route to persuasion.

Two additional caveats are important to note. First, although current drug prevention programs such as DARE that utilize variables suggested by current social influence theories appear promising, to conclude that they are maximally impactful would be overstating their success. Some follow-up evaluations of these programs demonstrate that there are occasional significant differences in adolescents' knowledge about, attitudes toward, intentions to use, and abilities to resist illicit drug use as much as a year later. However, most of these programs are instituted in the sixth and seventh grades, before the greatest impact of peer pressure is felt (i.e., high school). Some evaluations of programs later on suggest no difference in behavior with respect to drug use in these later years (e.g., Kim, McLeod, & Shantzis, 1989).

Related to this issue, it is important to be aware of the specific issues faced by each target population. For example, Project DARE has recently been experimentally extended to a test group of high school students in Columbus, Ohio. Initial impressions of some of the participants were characterized as somewhat skeptical. Students agreed that the program had merit for younger kids. However, they felt that it did not address the issues and pressures that they, as older students, were experiencing.

THEORETICAL IMPLICATIONS FOR CHANGING ATTITUDES ABOUT DRUGS

Although considerable work has shown that it is possible to change people's knowledge about drugs, it does not directly follow that these knowledge differences turn into attitude and/or behavior change. This article has emphasized that information will only be successful in producing relatively lasting changes in at-

[1]Of course, if students have unfavorable attitudes about the police, then the presentation of a message by an officer could serve as a rejection cue, lead to counterarguing, and so forth.

titudes (and perhaps behavior) if people are motivated and able to process the information, 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 (e.g., see Bandura, 1982). Thus, current work on attitude and behavior change may help to account for some unsuccessful translations of antidrug knowledge and/or attitudes into antidrug behaviors. First, the antidrug 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.

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. Research in social influence provides some insight into variables that will enhance the thoughtful processing of antidrug information.

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