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# Creating Strong Attitudes: Two Routes to Persuasion

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## INTRODUCTION

Numerous attempts have been made to produce changes in the drug use behavior of individuals by providing information about the undesirability of drugs and the potential harmful consequences associated with them. For example, the U.S. Government has sponsored multimedia antidrug campaigns, such as "Cocaine, the Big Lie," developed by the National Institute on Drug Abuse (NIDA) (Forman and Lachter 1989), and local school and police organizations routinely conduct influence programs in small-group settings (e.g., Project DARE) (DeJong 1987). In addition to influencing the drug use of individuals, it might also be important to change the drug treatment behavior of professionals in the field when new treatment methods are developed. What does the accumulated literature in social psychology say about changing the behavior of individuals, whether they are drug users or drug treatment professionals?

Social scientists have identified a number of factors that serve as determinants of behavior (Bandura 1986; Fishbein and Ajzen 1975; Triandis 1980). Among the most important factors are:

- A person's attitudes and goals,
- Perceptions of the attitudes of others (norms),
- Feelings of self-efficacy and actual competence, and
- Prior behaviors and habits.

This chapter focuses on the first of these factors, a person's attitudes. Changing individual attitudes is important for several reasons. First, attitudes often have a direct impact on people's behaviors. Second, if the attitudes of a large number of individuals change, then societal norms presumably will change as well. Normative pressure can produce behavior change even if an individual's own attitudes do not change. Third, unless people's attitudes are changed, they may lack the motivation necessary to acquire the new skills or break the old habits that allow new behaviors to occur.

Among the attitudes relevant to drug abuse prevention are attitudes toward (1) oneself (e.g., low self-esteem may contribute to drug use), (2) authority figures (e.g., parents, Government officials, and teachers who eschew drug use or who advocate new treatment approaches), (3) peers (e.g., friends and colleagues), (4) the drugs themselves (e.g., are they seen as harmful or exciting?), and (5) new drug treatment programs (e.g., are they seen as beneficial or ineffective?). The attitude construct has achieved a preeminent position in research on behavior change because of the assumption that a person's attitude is an important mediating variable between the acquisition of new knowledge and behavioral change. For example, initial drug abuse prevention efforts were often based on the view that providing the facts about drugs would lead to dislike of drugs and behavioral avoidance (Moskowitz et al. 1984; Wallack and Corbett 1987). In fact, assessments of drug prevention efforts sometimes have focused on the new knowledge acquired rather than on attitude and behavior change per se. However, knowledge change in the absence of attitude change is unlikely to result in behavior change.

Over the past 50 years, numerous theories of attitude change and models of knowledge-attitude-behavior relationships have developed (Eagly and Chaiken 1993; Petty et al. 1994). There are a number of ways to integrate the thousands of studies on attitude change in the social psychological literature. One such approach, made popular by McGuire (1985, 1989), is presented in this monograph (McGuire, this volume). The present chapter outlines an alternative approach to organizing the persuasion literature.

### THE ELABORATION LIKELIHOOD MODEL OF PERSUASION

The goal of any psychological theory of attitude change is to explain *how* different variables, such as those associated with the source of the message (e.g., expertise), the message itself (e.g., number of message arguments), the recipient (e.g., intelligence), or the persuasion context (e.g., presence of distractions) influence the amount of attitude change produced. That is, by what psychological mechanisms do certain variables have their effects? The Elaboration Likelihood Model (ELM) of persuasion (Petty and Cacioppo 1981, 1986), which is depicted schematically in figure 1, attempts to provide an integrative framework for understanding the antecedents and consequences of attitude change.

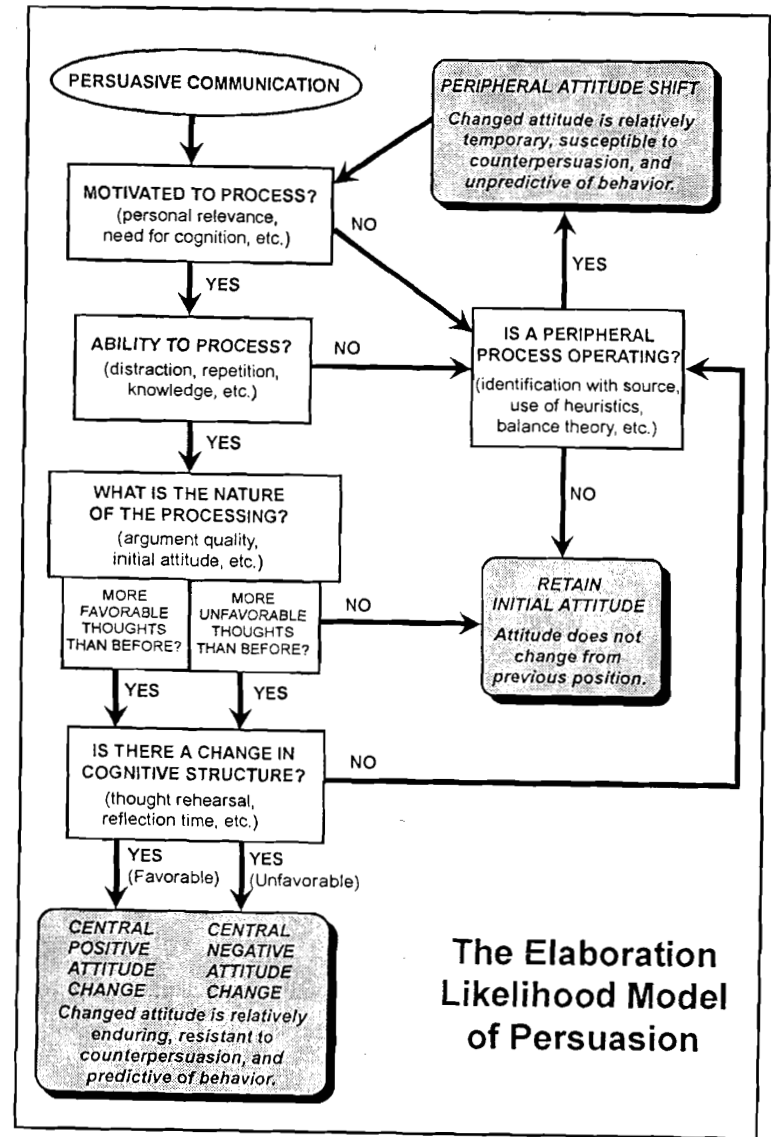


FIGURE 1. The Elaboration Likelihood Model of persuasion. This figure depicts the antecedents and consequences of central and peripheral routes to attitude change.

SOURCE: Adapted from Petty and Cacioppo 1986.

At its most rudimentary level, this model suggests that there are basically two relatively distinct routes to persuasion, the central route and the peripheral route. Many of the prior theories of attitude change focused on either one or the other of these routes. Understanding these routes is important, according to the ELM, because important consequences depend on which route to persuasion is followed. This model also suggests that attitude change is accomplished by variables that invoke one of a finite set of psychological processes.

### Central Route

According to the ELM, the central route to persuasion involves effortful cognitive activity whereby the person draws upon prior experience and knowledge to scrutinize and evaluate the issue-relevant arguments presented in the communication (regardless whether the source is the mass media or a friend, parent, colleague, or teacher). Under the central route, the person actively evaluates the message, relates it to his or her own life, and generates favorable or unfavorable thoughts in response to it. For this to occur, the person must possess sufficient motivation and the ability to think about the merits of the information. Many variables can influence a person's motivation to think about a message, such as whether the message is perceived to be personally relevant (Petty and Cacioppo 1979a). In addition, many variables can influence a person's ability to think about a message, such as how much distraction is present in the persuasion context (Petty et al. 1976). If a person is both motivated and able to think about the underlying arguments in a message, this careful and systematic processing will result in an attitude that is well articulated and integrated into the person's belief structure.

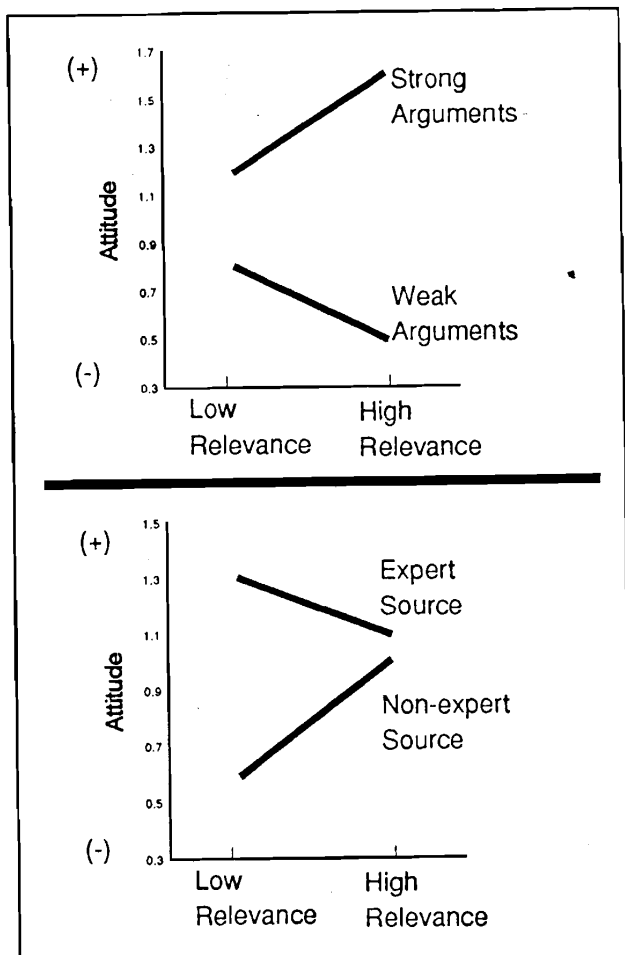
### Peripheral Route

In stark contrast to attitude change under the central route, some theories of persuasion place little credence on the arguments in a message or on issue-relevant thinking. Instead, they postulate a peripheral route whereby simple cues in the persuasion context either elicit an affective state, such as happiness, that becomes associated with the advocated position, as in classical conditioning (Staats and Staats 1958), or trigger a relatively simple inference that a person can use to judge the validity of the message. For example, a message from an expert can be judged by the inference that experts are generally correct (Chaiken 1987) without the need for the recipient to devote much effort to assessing the actual merits and implications of the information. Public service

announcements attempt to use this strategy when they rely on the audience accepting a conclusion simply because it is associated with a well-liked celebrity or sports figure. Peripheral approaches can be very effective in producing changes in attitudes, at least in the short term.

To illustrate the two routes to persuasion, consider the results of an experiment in which researchers varied the quality of the arguments in a persuasive message and the variable that served as a peripheral cue—the expertise of the message source (Petty et al. 1981). The subjects in this study—college students—received one of four messages: (1) a message with compelling arguments presented by an expert source, (2) a message with specious arguments presented by an expert source, (3) a message with compelling arguments presented by a nonexpert source, or (4) a message with weak arguments presented by a nonexpert source. The message was easy to understand and was presented without any distractions. Thus, all of the recipients were able to think about the message if they desired. However, the experiment manipulated the motivation of the students to think about the message they received by leading some of them to believe that the proposal, which advocated a change in an important university regulation, would take effect next year and, therefore, would have an impact on all current students. Other students were told that the proposal would not take effect for 10 years, which meant it would have no implications for current students. When the message was highly relevant to the students, their attitudes toward the proposal were based on the quality of the arguments in the message. The expertise of the source made little difference. That is, when the message was highly relevant, subjects followed the central route to persuasion and carefully evaluated the merits of the issue-relevant information presented. However, when the message was irrelevant, attitudes were not influenced by message quality, but by the salient expertise cue. These low-involvement subjects followed the peripheral route to persuasion (see figure 2). Many such simple cues have been shown to be highly effective in changing attitudes when people are either unmotivated or unable to think about the message. These cues can be associated with the source of the communication (e.g., attractiveness), the message (e.g., the mere number of arguments it contains), the message recipient (e.g., what mood the person is in), or the persuasion context (e.g., the presence of rewards) (Petty and Cacioppo 1986; Petty et al. 1994).

In sum, a number of variables that are potentially under the control of health professionals constructing drug-relevant communications can have an impact on persuasion by influencing a message recipients' motivation



**FIGURE 2.** *Personal relevance and the route to persuasion. This figure shows that when personal relevance is high, attitudes are more influenced by the quality of the arguments than when relevance is low (top panel). However, when personal relevance is low, attitudes are more influenced by the expertise of the source than when relevance is high (bottom panel).*

SOURCE: Adapted from Petty et al. 1981.

or ability to think about the communication. In addition to variables such as the personal relevance of the message or the presence of distractions that tend to affect information-processing activity in a relatively objective manner, some variables are important because they influence the *nature* of the thoughts that come to mind. Sometimes these variables influence the nature of the thinking that takes place by introducing a systematic bias to the information-processing activity. For example, telling a highly involved audience that a message is attempting to persuade them motivates active resistance and counterarguing rather than objective processing (Petty and Cacioppo 1979b). On the other hand, when people are motivated to think and are in a pleasant mood, they are biased toward generating favorable rather than unfavorable thoughts (Petty et al. 1993). Finally, in addition to variables influencing the amount or nature of information-processing activity, variables also can serve as simple cues inducing change without much effortful thinking about the substantive merits of the information provided.<sup>1</sup>

### Consequences of the Route to Persuasion

Why does it matter if a particular variable induces attitude change by the central route (i.e., by increasing the likelihood of thinking about the substantive merits of a particular position) or by the peripheral route (i.e., by serving as a simple acceptance cue)? The ELM holds that the route to persuasion is important because attitudes formed or changed by the central route tend to have different consequences and properties than attitudes modified by the peripheral route (Petty et al., in press). For example, central route attitudes are more accessible than peripheral route attitudes—that is, they come to mind more quickly. Because these attitudes come to mind easily and are typically accessible upon the mere presentation of the relevant attitude object, they are more likely to influence behavior (Fazio 1990). For example, if a person's antidrug attitude comes to mind spontaneously on appropriate occasions, drugs are more likely to be avoided than if the negative attitude requires considerable cognitive effort to be retrieved. Studies have shown that attitudes formed or changed as a result of effortful thinking are more predictive of behavioral intentions than attitudes formed or changed with little thinking (Petty et al. 1983; Verplanken 1991). Not surprisingly, the attitudes of people who are highly involved with a health issue are more predictive of their behavioral intentions regarding the issue than are the attitudes of people who are less involved (Hoverstad and Howard-Pitney 1986).

Research also suggests that attitudes formed by the central route are more persistent over time and more resistant to counterpersuasive attempts. For example, two studies (Haugtvedt and Petty 1992) produced similar attitude changes in people who differed in their need for cognition. Need for cognition is measured by having people respond to a scale developed to assess individual differences in the tendency to engage in and enjoy effortful cognitive activity (Cacioppo and Petty 1982). In each study, all participants were presented with a message containing strong arguments presented by a credible source. Individuals with a high need for cognition and individuals with a low need became more favorable toward the position taken in the message following exposure, but presumably for different reasons. That is, individuals with a high need for cognition, who characteristically enjoy thinking, were expected to change because of their careful thinking about the strong arguments that were presented. Individuals with a low need for cognition, who act as cognitive misers, were expected to change because of the positive source cue. In one study, when attitudes toward the issue were examined just 2 days after the initial persuasive message, recipients with a low need for cognition had returned to their original attitude positions, but those with a high need persisted in their new attitudes. In a second study, subjects' new attitudes were challenged just a few minutes after they were created. Subjects with a high need for cognition resisted the attacking message to a greater extent than did those with a low need. Attitude change is not particularly valuable if the new attitude does not come to mind easily, persist over time, resist countervailing pressures, and predict behavior. Thus, attitude changes induced by the central route are preferable to attitude changes induced by the peripheral route.

In research on drug abuse prevention and on the diffusion of new drug abuse programs, many source, message, recipient, and contextual variables have been, and will continue to be, examined. The ELM notes that it is critical to understand the processes by which these variables work. For example, some health education programs have noted that peer-led discussion groups can be superior to groups led by authority figures (Jordheim 1975). Even if research demonstrates that peers are more effective than authorities in changing attitudes, it would be important to know if this was because a peer source served as a simple positive cue (e.g., "I like and trust people who are similar to me") or if a peer source enhanced the attention to and the processing of the substantive arguments. If peers work by serving as simple cues to acceptance, they can be effective in the short term, but if they work by

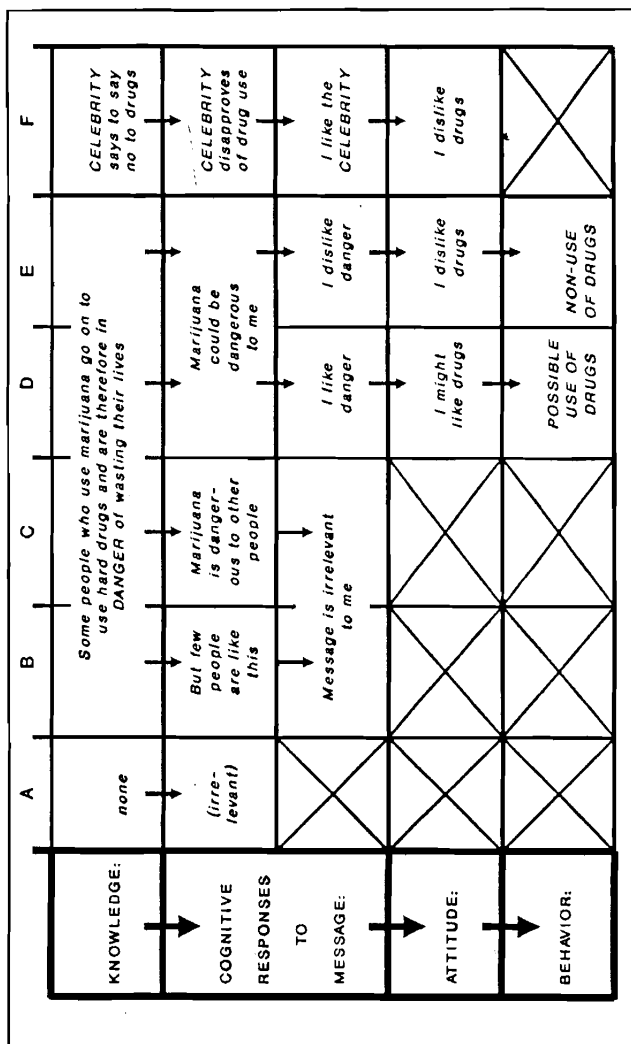
increasing thinking about and acceptance of the substantive arguments raised, then the attitude changes induced will be stronger.

## USING THE ELM IN DRUG ABUSE SETTINGS

### Why Knowledge or Attitude Change Need Not Produce Behavior Change

Figure 3 demonstrates many of the ELM principles by diagramming the reactions of six hypothetical individuals to an antidrug public service announcement presented on television. The campaign sponsors want young people to learn that using marijuana is dangerous because it can lead to the use of hard drugs. The spot features a popular celebrity who tells about two friends who were seriously harmed by drugs (Petty et al. 1991).

As depicted in the figure, 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 recall or comprehension test on the specifics of the communication. Importantly, current models of persuasion such as the ELM suggest that it is unlikely that one can judge the effectiveness of a message solely by examining the knowledge acquired from the communication. Rather, an individual's idiosyncratic thoughts and interpretations of 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 invulnerable to the threat. Thus, both persons B and C dismiss the message as irrelevant to them, but 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 be desirable. Person E, who shows the expected response of disliking danger, comes to dislike the drug. (See Fishbein and Middlestadt 1987 for further discussion of the role of idiosyncratic beliefs in changing 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. Thus, having the motivation and ability to process a message is not sufficient to produce attitude change in the intended direction. The substance of the message must elicit the desired profile of thoughts.



**FIGURE 3.** Idiosyncratic reactions to an antidrug public service announcement. The figure depicts the possible knowledge, thoughts, attitudes, and behavior of six hypothetical individuals in response to an antidrug television commercial.

SOURCE: Adapted from Petty et al. 1991.

Person F misses the point about the potential danger of drugs entirely (and thus would fail the comprehension test) but does learn that the featured celebrity does not like drugs. Because person F likes the celebrity, she also comes to dislike the drug mentioned in the announcement. Finally, persons E and F have the same attitude; however, as anticipated by the ELM, some attitude changes have greater implications for subsequent behavior than others. Person E's antidrug attitude, induced through the central route of persuasion, produces drug avoidance, but person F's antidrug attitude, induced through the peripheral route, does not.

In short, figure 3 demonstrates that:

- Attitude change can occur in the absence of the presumably critical knowledge (person F);
- The critical knowledge can be acquired without producing any attitude change (persons B and C);
- The same knowledge can lead to opposite attitudes, depending on how people evaluate the information (persons D and E); and
- 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 (Kinder et al. 1980; Rundall and Bruvold 1988).

### Using the ELM To Develop Attitude Change Treatments

How can the ELM be used to develop effective persuasion treatments? A useful first step would be to elicit peoples' thoughts and ideas on the topic of the persuasion attempt. These thoughts and ideas would be content analyzed to determine why people hold the attitudes that they do. What are the key dimensions along which the target audience assesses the issue? What factors would likely induce resistance to attitude change? By using these thought listings, a persuasive message can be developed that targets the relevant beliefs.

Step 2 is message construction. Here, the goal is to create a persuasive message that is compelling for the target audience. Once an initial message is developed, it needs to be tested in step 3 by instructing a sample of individuals from the target audience to list their thoughts about it. These thoughts are content analyzed to ascertain which aspects of the communication elicit favorable thoughts and reactions and which are resisted and counterargued. Based on this analysis, the message is refined in step 4. The goal is to produce a message that maximizes favorable thoughts and minimizes negative thoughts when people think about it.

In step 5, ability and motivational factors are considered. Regarding ability, the goal is to ensure that the message is comprehensible to the target audience and is presented in an environment that is free of distraction and that fosters thinking. This is relatively easy. Motivating careful information-processing activity can be more challenging. However, this can be accomplished by increasing the personal relevance of the materials and increasing personal involvement by having people self-generate arguments and engage in various role-playing exercises.

In the final step, the full persuasion treatment is tested to examine the extent to which the message produces attitude change in the desired direction. In addition, the strength of the attitudes produced should be examined. As noted earlier, strength can be assessed in a number of ways. For example, one can assess the extent to which the attitude is congruent with the person's beliefs, how stable the attitude is over time, how well the attitude stands up to attack when it is challenged, or how quickly the attitude comes to mind. These procedures to assess attitude strength are especially useful when comparing two competing persuasion treatments. According to the ELM analysis, if one persuasion treatment produces 2 units of change in the desired direction and the newly changed attitude is strong (e.g., stable over time, resistant to change), whereas another persuasion treatment produces 4 units of change and the attitude is weak (e.g., not persistent, not resistant), the former treatment will generally be preferable. In fact, a key insight of the ELM is that producing 4 units of attitude change through the peripheral route may not be as desirable as producing just 2 units of attitude change through the central route.

## CONCLUSION

Research on social influence has progressed a long way from the early notion that providing antidrug information alone will prevent drug use. Social influence is a complex, though explicable, process. The extent and nature of a person's thoughts in response to external information may be more important than the information itself. In addition, attitudes can be changed in different ways (central versus peripheral routes), and some attitude change processes result in attitudes that are more accessible, stable, resistant, and predictive of behavior than other change processes.

## NOTES

1. It is important to note that, according to the ELM, any one variable can serve in multiple roles in different situations. For example, when the likelihood of thinking is very low, positive mood serves as a simple peripheral cue and increases attitude change regardless of the merits of the arguments presented. When the likelihood of thinking is very high, positive mood biases the nature of the thoughts that come to mind. When other variables in the persuasion setting have not created a very high or a very low elaboration likelihood, a person's mood can determine how much thinking he or she does (Petty et al. 1994; Wegener and Petty, in press).

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