
***The Elaboration Likelihood Model
of Persuasion: Applications in
Recreation and Tourism***

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Millions of dollars are spent each year in attempts to persuade people to visit recreation and tourist attractions in the United States. Once the visitors arrive, more money is spent to persuade them to take care of the environment, follow rules and engage in safe, nondestructive behaviors. These persuasion attempts typically involve providing people with information via the mass media, mailed or on-site brochures and pamphlets, signs or face-to-face contact. The success of such informational efforts depends in part on: (a) whether the attitudes of the recipients are modified in the desired direction (e.g., do people become more favorable toward visiting the scenic rivers of West Virginia and less favorable toward littering in state parks?), and (b) whether these attitudes in turn influence peoples' behaviors (e.g., do people actually visit West Virginia's rivers and dispose of their trash properly?).

Our goal in this chapter is to present an overview of psychological approaches to social influence, and to outline in some detail a general framework for understanding the processes responsible for attitude change. This framework is called the Elaboration Likelihood Model of persuasion (Petty and Cacioppo 1981, 1986b).

BEHAVIORAL INFLUENCE VIA PERSUASIVE COMMUNICATION

As the chapters in this volume document, many recreation and tourism studies have investigated the effect of providing information on changes in recipients' knowledge, attitudes and behaviors. Yet relatively few studies have focused on the processes responsible for these changes. Understanding the causal links among knowledge, attitudes and behaviors, and familiarity with the basic mechanisms by which change is achieved should increase the likelihood of selecting appropriate persuasion strategies.

Overview of Approaches to Persuasion

Social scientists 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 field of recreation and tourism are those toward: (a) oneself (e.g., low self-esteem may contribute to vandalism); (b) authority figures (e.g., are park rangers seen as credible and helpful facilitators or as strict disciplinarians?); (c) peers (e.g., are fellow campers respected or denigrated?); (d) different environments (e.g., are nature areas seen as worth preserving for future generations?); and (e) wildlife (e.g., are bears seen as dangerous?). Any of these attitudes might be appropriate targets for change.

The attitude construct has achieved its preeminent position in social influence research because of the assumption that a person's attitude is an important mediating variable between the acquisition of new knowledge, on the one hand, and behavioral change, on the other. For example, an educational intervention might be based on the idea that giving people information about the habits of bears will lead them to infer that bears are dangerous and take safety precautions.

Over the past 50 years, researchers have developed numerous theories of attitude change and models of knowledge-attitude-behavior relationships (see reviews by Chaiken and Stangor 1987, Cooper and Croyle 1984, Petty, Unnava and Strathman 1991). One of the earliest assumptions in theories of attitude change was that effective influence required a sequence of steps (e.g., McGuire 1985, Strong 1925). For example, typical models of influence contend that a person first needs

to be *exposed* to some new information. Secondly, the person must *attend* to the information presented. Just because a person is handed a brochure doesn't mean that the person will be motivated to read it. Or, a person driving past a 100-word sign at 50 m.p.h. may be unable to attend to the information it presents. A third issue concerns *reception*, or what part of 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.

Nevertheless, when some new information *is* learned as a result of an educational intervention, will this new knowledge lead to attitude or behavior change? Current research strongly indicates that attitude change depends upon the manner in which a persuasive message is idiosyncratically evaluated and *interpreted* so that it makes some psychological sense to the person. Received information 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 responses to the information, the more likely that attitudes will change in a positive direction, and 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 (Greenwald 1968, Petty, Ostrom and Brock 1981).

Once the information received has elicited thoughts and/or feelings, these must be *integrated* into an overall impression or evaluation that is then stored in memory (Anderson 1981). The integration process may be very simple if few thoughts are triggered, but in other circumstances may involve a complex weighting of information. In any case, only after some overall evaluation or attitude is formed is it capable of guiding subsequent *action*, which is the ultimate stage in the influence sequence (Petty and Cacioppo 1984b).

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 percent, the probability of achieving all six steps (exposure, attention, reception, interpretation, integration and action), would be .6⁶ or only five percent (McGuire 1981).

A second factor is that some steps in the sequence may be independent of each other. For example, although a person's ability to learn and recall information (e.g., facts about a tourist destination) was often thought to be an important causal determinant of and prerequisite to attitude and behavior change (e.g., liking and visiting the destination), little empirical evidence supports this view (McGuire 1985, Petty and Cacioppo 1981). Rather, existing evidence shows that message learning can occur in the absence of attitude change, and that a person's attitudes may change without learning the specific information in the communication.

That is, a person may be able to learn all of the intended information perfectly, but not be persuaded because the information is either counterargued or deemed personally irrelevant. On the other hand, a person may get the information all wrong (scoring zero on a knowledge test), but think about it in a manner that produces the intended change. This analysis may help to explain why previous research on recreation and tourism has sometimes found that knowledge changes occur in the absence of attitude change and vice-versa (see other chapters in this volume). Verbatim recall of a message is most likely to be related to attitudes when the initial message is not elaborated and no initial attitude is formed, but an attitude is subsequently formed on the basis of the unelaborated message information that can be retrieved from memory (Mackie and Asuncion 1990, Petty, Unnava and Strathman 1991).

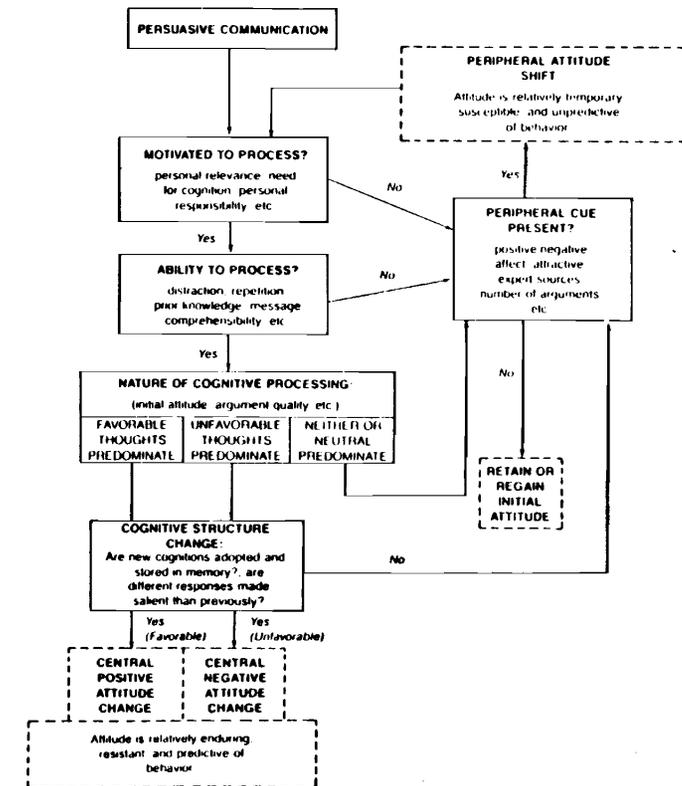
The Elaboration Likelihood Model of Persuasion [ELM]

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?). By far the most research, however, focuses on how variables affect the interpretation stage of information processing. This stage is sometimes viewed as the most critical one, since it is during interpretation that the message achieves some meaning, is evaluated favorably or unfavorably, and is accepted or rejected (i.e., at this stage the person yields to or resists the message).

According to the Elaboration Likelihood Model of persuasion (ELM), the processes that occur during the interpretation stage are seen as emphasizing one of two distinct "routes to persuasion" (Petty and

Cacioppo 1981, 1986a). These routes are depicted in Figure 1. The "central route" 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. For this to occur, the person must be both motivated and able to process the perceived merits of the information provided. The 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 accessible, persistent over time, predictive of behavior, and resistant to change until they are challenged by cogent contrary information (see Petty and Cacioppo 1986a). People engaged in this effortful cognitive activity have been characterized as engaging

Figure 1
Schematic depiction of The Elaboration Likelihood Model of Persuasion. The figure shows the possible endpoints after exposure to a persuasive communication for people following central and peripheral routes to attitude change (from Petty & Cacioppo 1986a).



in "systematic" (Chaiken 1987) or "mindful" (Palmerino et al. 1984) processing.

In stark contrast to the central route to persuasion, the ELM holds that attitude change does not always require effortful evaluation of the message arguments. Instead, when a person's motivation or ability to process the issue-relevant arguments is low, persuasion may occur by a "peripheral route" in which simple cues in the persuasion context influence attitudes. For example, cues may elicit an affective state (e.g., happiness) that becomes associated with the advocated position (as in classical conditioning, Staats and Staats 1958), or trigger a relatively simple inference (e.g., "I bought it, so I must like it," Bem 1972) or heuristic (e.g., "experts are correct," Chaiken 1987) by which a person can judge the message. Public service announcements employ this strategy when they rely on a well-liked celebrity to induce attitude change rather than focusing on the merits of the arguments presented.

Peripheral approaches can be quite effective in the short term. The problem is that over time, peoples' feelings about celebrities may change, and the sources may become dissociated from the message. These factors would then undermine the basis of the attitude. Laboratory research has shown that attitude changes based on peripheral cues tend to be less accessible, persistent and resistant to subsequent attacking messages than attitudes based on careful processing of message arguments (Petty and Cacioppo 1986a). Thus, people who hold positive environmental attitudes based solely on trendy celebrity endorsements may be less likely to resist situational pressures to engage in anti-environmental acts than are people who have developed positive attitudes toward the environment after careful reflection upon and understanding of the consequences of various anti-environmental behaviors.

In sum, 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 on more passive acceptance or rejection of simple cues and have a less well-articulated cognitive foundation.

Persuasion Processes in the Elaboration Likelihood Model

Discussing the central and peripheral routes to persuasion has highlighted two basic processes of attitude change, but the depiction of the ELM in Figure 1 outlines more specific roles that variables may play in persuasion situations. Some variables affect a person's general

motivation to process a message. For example, people are more interested in thinking about messages that are perceived to have some direct personal relevance. In one study (Petty and Cacioppo 1979b), for example, undergraduates were told that their university (high personal involvement), or a distant university (low personal involvement), was considering implementing a policy requiring all seniors to pass an exam in their major as a prerequisite to graduation. The students were presented with either strong or weak arguments in favor of the exam policy. As predicted by the ELM, when the speaker advocated that the exams should be instituted at the students' own university, the quality of the arguments in the message had a greater impact on attitudes than when the speaker advocated that the exams should be instituted at a distant campus. That is, as the personal relevance of the message increased, strong arguments were more persuasive, but weak arguments were less persuasive than in the low relevance conditions (see left panel of Figure 2).

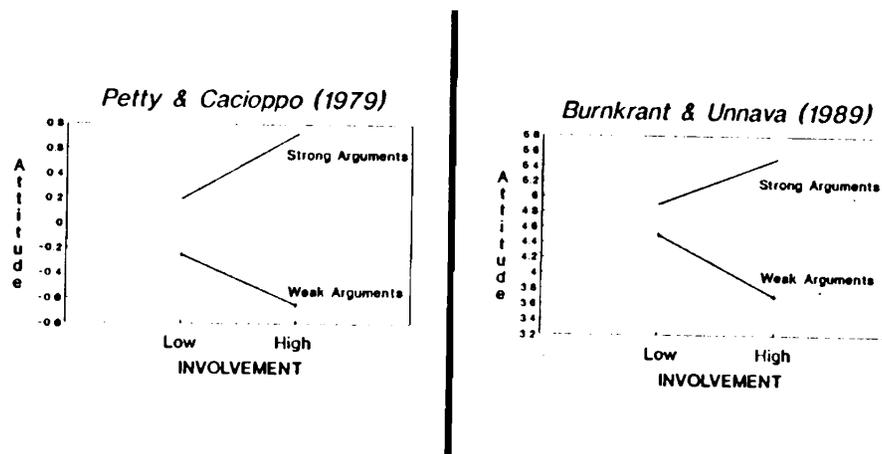
In addition, an analysis of the thoughts students listed after the message suggested that the more extreme attitudes were accompanied by more extreme thoughts. When the arguments were strong, students exposed to the high relevance message produced more than twice as many favorable thoughts as low relevance subjects, and when the arguments were weak, high relevance subjects generated almost twice as many unfavorable thoughts as students exposed to the low relevance version.

In an interesting extension of this work, a recent study has found that simply changing the pronouns in a message from the third person (e.g., "one" or "he and she") to the second person (i.e., "you") was sufficient to increase personal involvement and processing of the message arguments (Bumkrant and Unnava 1989, see right panel of Figure 2). That is, when the messages contained relevant pronouns, strong arguments were more persuasive and weak arguments were less persuasive than when third person pronouns were used.

Although increasing the perceived personal relevance of a message is an important way to increase thinking (see also Brickner et al. 1986, Leippe and Elkin 1987), it is not the only one. For example, several recent studies have shown that when a person is normally not motivated to think about the message arguments, more thinking can be provoked by summarizing the major arguments as questions rather than as assertions (Howard 1990, Petty, Cacioppo and Heesacker 1981, Swasy and Munch 1985). Thus, following an argument in a radio

Figure 2

Self-relevance increases message processing. In each panel, as self-relevance (involvement) increases, argument quality becomes a more important determinant of the attitudes expressed after exposure to a persuasive message. Data in the left panel are from an experiment by Petty and Cacioppo (1979b). Data in the right panel are from an experiment by Burnkrant and Unnava (1989). In each panel, higher numbers indicate more favorable attitudes toward the position taken in the persuasive message.



commercial by a question ("Wouldn't this help to prevent forest fires?") rather than by an assertion ("This would help to prevent forest fires"), would result in greater processing of the argument. Of course, this processing will aid persuasion if the argument preceding the question is cogent, but it will be detrimental to persuasion if the argument is specious.

As outlined in Figure 1, having the necessary motivation to process a message is not sufficient to trigger the central route to persuasion. People must also have the ability to process a message. For example, a complex or long message may require more than one exposure for maximal processing, even if the recipient is highly motivated to think about it. The increased processing with multiple exposures should lead to more favorable thoughts and attitudes if the

arguments are strong, but to more counterarguments and less favorable attitudes if the arguments are weak (Cacioppo and Petty 1989).

Message repetition, of course, is just one variable that influences a person's ability to think about a message. For example, if a message is accompanied by distraction (Petty, Wells and Brock 1976) or if the speaker talks too fast (Smith and Shaffer, in press), thinking about the message will be disrupted. When strong arguments are presented, disrupting thinking should diminish persuasion, but when weak arguments are presented, disrupting thinking should enhance persuasion by reducing counterarguing (see Petty and Brock 1981).

In addition to affecting a person's motivation or ability to process a message, Figure 1 indicates that variables can also affect persuasion by influencing the *nature* of the thoughts elicited. That is, some features of the persuasion situation increase the likelihood of favorable thoughts being elicited, but others increase the likelihood of unfavorable thoughts coming to mind. Although the subjective cogency of the arguments employed in a message is a prime determinant of whether favorable or unfavorable thoughts are elicited, other variables can also be influential in determining whether favorable or unfavorable thoughts predominate (Petty and Cacioppo 1990). For example, instilling "reactance" in message recipients by telling them that they have no choice but to be persuaded on an important issue motivates counterarguing even when the arguments used are strong (Brehm 1966, Petty and Cacioppo 1979a). Similarly, people who possess considerable attitude-congruent knowledge are better able to defend their attitudes than those who have little information supporting their views (Wood 1982).

Next, as shown in Figure 1, features of the persuasion situation may influence the extent to which thoughts elicited by a message are consolidated and stored in long term memory. For example, arguments that match a person's attitude schema are more easily incorporated into the existing cognitive structure than arguments that do not match (Cacioppo, Petty and Sidera 1982).

Finally, Figure 1 indicates that variables may serve as simple peripheral cues, allowing favorable or unfavorable attitude formation in the absence of diligent consideration of the true merits of the object or issue. Among the variables that can serve as simple cues when motivation or ability to process arguments is low are the credibility of the message source (Petty, Cacioppo and Goldman 1981), how likable or attractive the source is (Chaiken 1980, Petty, Cacioppo and Schumann 1983), the mere number of arguments in the message (Alba and

Marmorstein 1987, Petty and Cacioppo 1984a), the length of the arguments (Wood et al. 1985), the number of other people thought to endorse the position (Axson et al. 1987), and others.

The ELM holds that as the likelihood of elaboration is increased, whether or not 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 elaboration likelihood is decreased, however, peripheral cues become more important. In short, when the elaboration likelihood is high, the central route to persuasion dominates, but when the elaboration likelihood is low, the peripheral route takes precedence.

As we have noted, the accumulated research on persuasion points to many variables that can be employed to either increase or decrease the amount of thinking about a persuasive message. Although we have focused on motivational and ability variables that can be modified by external means (e.g., including rhetorical questions in a message enhances motivation to think about the arguments), other determinants of motivation and ability to process a message are dispositional (e.g., "people high in 'need for cognition' tend to chronically engage in and enjoy thinking," Cacioppo and Petty 1982).

Multiple Roles for Variables in the Elaboration Likelihood Model

One of the most important features of the ELM is its premise that any one variable can affect persuasion by serving in different roles in different situations. That is, a variable can serve as a peripheral cue in some contexts, affect the motivation or ability to think about the message in other situations, and influence the nature of the thoughts that come to mind 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, Kasmer, Haugtvedt and Cacioppo 1987, for discussion).

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, and so on), people typically know that they want and are able to evaluate the merits of the arguments presented, and they do so. Variables in the persuasion setting are likely to have little direct impact on evaluations by serving as simple peripheral cues in these situations. Instead, when the elaboration likelihood is high, a variable may serve as an argument if it is relevant to the merits of the issue, or the variable may determine the nature of the ongoing information processing activity (i.e., is the processing relatively objective or biased?).

On the other hand, when the elaboration likelihood is low (e.g., low personal relevance or knowledge, complex message, many distractions, and so on), people know that they do not want 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 result from relatively simple associations or inferences based on salient cues.

When the elaboration likelihood is moderate (e.g., uncertain personal relevance, moderate knowledge, moderate complexity, and so on), 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. A few examples should help to clarify the multiple roles that a variable can have in different situations.

Multiple roles for source factors. First, consider the multiple processes by which source factors (e.g., expertise, attractiveness) can have an impact on persuasion (see Petty and Cacioppo 1984c). Some research has found that when the elaboration likelihood was low, source factors such as expertise and attractiveness served as simple positive cues, enhancing attitudes regardless of argument quality. However, when the elaboration likelihood was high, source factors did not serve as simple cues. Instead, attitudes were determined primarily by the nature of the arguments presented (Chaiken 1980, Petty, Cacioppo and Goldman 1981). Finally, in two separate experiments in which the elaboration likelihood was not manipulated but was held constant at a moderate level, the source factors of expertise and attractiveness deter-

mined how much thinking subjects did about the arguments presented (Heesacker et al., 1983, Puckett et al. 1983). That is, attractive and expert sources led to more persuasion when the arguments were strong, but to less persuasion when the arguments were weak.

Interestingly, the self-monitoring scale (see Snyder 1987) has been used recently to distinguish people who tend to think more about what experts have to say (i.e., low self-monitors) from those who are more interested in what attractive sources have to say (i.e., high self-monitors; DeBono and Hamish 1988, DeBono and Telesca 1990). In any case, the accumulated research has shown clearly that source factors are capable of serving in different roles.

Only one study to date has examined the effects of a source factor across three distinct levels of elaboration likelihood. This study (Moore et al. 1986, Experiment 3) provided support for the ELM contention that variables can serve in different roles in different situations. Specifically, Moore et al. manipulated the likelihood of message elaboration by varying the speed of a radio advertisement for a product. In addition to the speed of the announcement, the credibility of the product endorsers and the quality of the arguments for the product were also varied. This experiment revealed that when the advertisement was presented at a very rapid pace so that it was difficult to process (i.e., low elaboration likelihood), people were greatly influenced by the credibility of the product endorser, but the quality of the arguments for the product had little effect. When the message was presented at a normal pace and was easy to process (i.e., high elaboration likelihood), the quality of the arguments in the ad made a difference, but the credibility of the endorser was reduced in importance compared to the fast message conditions. Finally, when the message was presented at a moderately fast pace and processing was possible but challenging, the expertise of the endorser determined how much message processing occurred—the expert source induced more thinking than the nonexpert (see Petty, Kasmer, Haugtvedt and Cacioppo 1987, for further discussion).

Multiple roles for message factors. Message factors have also been shown to serve in multiple roles in different situations. For example, in a recent study the effect of a direct advertisement for an unknown product was contrasted with an advertisement that compared the new product to a well-established one (Pechman and Estaban 1990). Unlike a direct message that simply provides support for its position (e.g., You should visit Wicwac park because...), an upward comparison

message suggests that the critical issue or product is similar to one that is already seen as desirable (e.g., You should visit Wicwac park, similar to Yellowstone, because...). In order to examine the multiple roles for this message variable, direct and upward comparison ads containing either strong or weak arguments were presented following instructions and procedures designed to elicit either a relatively low motivation to process the critical ad (the target ad was embedded in a magazine format and subjects were instructed to read the magazine as they normally would), or moderate motivation to process (the target ad was embedded in a magazine format, but subjects were instructed to pay special attention to the critical ad), or high motivation to think (subjects were simply handed the target ad and were told to read it carefully). Effectiveness of the ads was assessed by asking subjects to rate their intentions to purchase the product.

When the low motivation procedure was used, the upward comparison ad produced more favorable intentions than the direct ad, but strong arguments did not produce more favorable intentions than weak ones. That is, under the low elaboration likelihood conditions, the comparison with the well known product served as a simple peripheral cue, and argument processing was minimal. When the high motivation to process conditions were examined, the opposite resulted. That is, under the high elaboration likelihood conditions, the strong arguments produced more favorable intentions than the weak ones, but the upward comparison was completely ineffective as a cue for producing more favorable intentions. Finally, when the moderate motivation conditions were analyzed, the use of an upward comparison ad was found to enhance processing of the message arguments. That is, when the upward comparison ad employed strong arguments, it led to more persuasion than the direct ad, but when the upward comparison ad used weak arguments, it produced less persuasion than the direct ad.

The results of the Pechman and Estaban (1990) study are comparable to the effects observed by Moore et al. (1986) who employed very different experimental operations. When motivation or ability to process the message arguments was low, source credibility and upward comparison claims served as simple cues. When motivation and ability to think about the arguments were high, credibility and upward comparison were unimportant as simple cues. Instead, whether the arguments were strong or weak was the primary determinant of persuasion. Finally, when motivation and ability to process were moderate, people evaluated the arguments only when it seemed worthwhile to do so—

when the source was credible or when the unknown product was linked to a desirable one.

Multiple roles for recipient factors. Finally, consider how an individual's mood, a recipient factor, might serve in multiple roles in different situations. If the elaboration likelihood is very low, a pleasant mood should be capable of serving as a simple cue, rendering people more positive toward whatever view is presented. What should happen if the elaboration likelihood is very high and people are clearly motivated and able to think about the arguments presented? Since pleasant moods have been shown to increase the accessibility of positive thoughts and ideas (see Bower 1981, Clark and Isen 1982), a pleasant mood under high elaboration conditions should introduce a positive bias to the thoughts generated. Finally, if the elaboration likelihood conditions are moderate, such as when a message is of uncertain relevance and people must decide whether or not to devote effort to thinking about the message, their current mood state may determine whether they engage in effortful cognitive activity (Bless et al. 1990, Mackie and Worth 1989, see Petty, Gleicher and Baker, 1991, for further discussion).

In a partial examination of the multiple ways in which a person's mood can influence attitudes, subjects were exposed to an advertisement for a product in the context of a relatively pleasant television program (an episode of a popular situation comedy) or a more neutral program (a segment from a documentary; Petty, Schumann, Richman and Strathman 1991).

The likelihood of thinking about the critical ad was varied by telling some subjects that they would be allowed to select a free gift at the end of the experiment from a variety of brands of the target product (high involvement), or that they would be allowed to select a free gift from another product category (low involvement). Following exposure to the ad subjects reported on their mood, rated their attitude toward the product, and listed the thoughts they had during the message.

The results of this study revealed that the pleasant program led to a more positive mood and more positive evaluations of the product under both high and low elaboration conditions. Importantly, and consistent with the notion that a pleasant mood produces positive attitudes by different processes under high and low elaboration conditions, was the finding that a pleasant mood was associated with more positive thoughts about the product under high but not low elaboration conditions.

Figure 3
Direct and indirect effects of positive mood on attitudes under high and low involvement conditions. Data in the left panel show that when involvement is low and people are not motivated to process the message, mood has a direct effect on attitudes. Data in the right panel show that when involvement is high and people are motivated to process the message, the effect of mood on attitudes is mediated by the generation of positive thoughts
 (Figure adapted from Petty, Gleicher and Baker 1991).

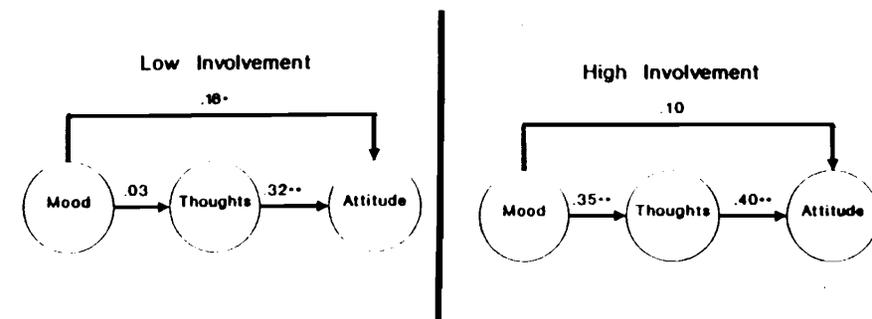


Figure 3 presents the results from causal path analyses that simultaneously estimated the three paths between (a) self-reported mood and attitude toward the product, (b) self-reported mood and proportion of positive thoughts generated, and (c) proportion of positive thoughts and attitude toward the product. Under low elaboration conditions, mood had a direct effect on attitudes, but did not influence thoughts (see left panel). In contrast, under high elaboration conditions, mood had no direct effect on attitudes. Instead, mood influenced the production of positive thoughts which in turn had an impact on attitudes (see right panel).

Consequences of multiple roles. Because any one variable can produce persuasion in multiple ways, it is important to understand the process by which the variable has influenced a person's attitude. 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 accessible, less persistent, less resistant, and less 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. Empirical research on recreation and tourism has examined many source, message, recipient and contextual variables but, as noted above, has paid little attention to the processes by which these variables work. The ELM holds that source, message, recipient and contextual factors can work by different processes in different situations, and that the process, central or peripheral, by which the variable induces change is critical for understanding the consequences of the new attitude (see Figure 1).

ATTITUDE-BEHAVIOR LINKS

Once a person's attitude changes (e.g., moves from anti- to pro-environment), 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 attitude-behavior consistency. For example, attitudes 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 indicate that the person's attitude is relevant to the behavior (see Ajzen 1988, for a comprehensive review).

Reasoned Action Versus Spontaneous Action

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 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 on the perceived likelihood that certain benefits will be obtained or costs avoided, and on the desirability or aversiveness of those benefits or costs.

In contrast to the Theory of Reasoned Action, Fazio (1990) has proposed that much behavior is rather spontaneous and that attitudes guide behavior by a relatively automatic process. Fazio notes 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 increase over more deliberative processes. When there is sufficient motivation and ability to think about one's behavior, a person may reflect upon the costs and benefits of the anticipated action. When motivation and ability to reflect are low, people's actions are determined by which attitudes are the most accessible.

Since attitudes formed by the central route tend to be more accessible than attitudes formed by the peripheral route, peripheral cues are likely to have an impact on immediate behavior only when the likelihood of reflection in the current environment is low and there are no accessible attitudes to guide behavior. For example, a person exploring a new park may need to make a quick decision about which trail to follow. If motivation and ability to think about the alternative paths are low or the information provided on a park sign is not useful, and no previous attitude or intention is available to guide action, simple cues in the immediate environment are likely to guide behavior (e.g., which trail seems more well traveled).

Social-Cognitive Learning Model of Behavior

In some domains an accessible attitude translates easily into behavior (e.g., I like candidate X, I will vote for this candidate). In other

domains, however, translating new attitudes into new behaviors is complex even if the person has the desire to act on the attitude. In some recreation and tourism situations attitudes change, though an important first step, may still 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 theory provides a framework to understand these processes.

Like the central route to persuasion and Theory of Reasoned Action described above, the social-cognitive theory perspective views voluntary behavior as determined in part by the personal consequences that a person anticipates from various courses of action. These consequences (rewards and punishments) may be anticipated because of prior personal experience or the observed experiences of others, or they may be expected simply as a result of cognitive reasoning processes.

According to Bandura, producing behavior change may require that a person learns new actions or skills or new sequences of already acquired actions. 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 people with whom the target identifies or admires. An important aspect of Bandura's framework is the idea that people do not always behave optimally, even though they know the "correct" behaviors and have positive attitudes about these behaviors. 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 abundant 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 are particularly powerful techniques.

IMPLICATIONS OF SOCIAL INFLUENCE MODELS

Although considerable work has shown that it is possible to change people's knowledge, we have argued that knowledge acqui-

tion does not invariably result in attitude and behavior change. Our brief review of basic theory and research on persuasion emphasizes that information will succeed in producing enduring changes in attitudes and behavior only if people are motivated and able to process the information, and if this processing results in favorable cognitive and/or affective reactions. Furthermore, once attitudes have changed, implementing changes in behavior may require learning new skills and perceptions of self-efficacy. Thus, current work on attitude and behavior change may help account for some unsuccessful translations of knowledge and/or attitudes into behaviors. First, the knowledge acquired may have appeared irrelevant to the recipients, or may have led to unfavorable rather than favorable reactions. Second, even if appropriate attitude changes were induced, the changes may have been based on simple peripheral cues rather than on elaborative processing of the message. Third, even if attitude changes occurred via the central route, the people influenced may have lacked the necessary skills or self-confidence to translate their new attitudes into action.

Perhaps the three most important issues raised in our review are: (1) although some attitudes are based on a careful reasoning process in which externally provided information is related to oneself and integrated into a coherent belief structure (central route), other attitudes are formed as a result of relatively simple cues in the persuasion environment (peripheral route); (2) any one variable (e.g., source credibility) may be capable of inducing persuasion by either the central or the peripheral route in different situations; and (3) although both central and peripheral route processes can lead to attitudes similar in their valence (how favorable or unfavorable they are), the manner of attitude change bears important consequences.

If the goal of a persuasion-based program is to produce long lasting changes in attitudes with behavioral consequences (e.g., attitudes about fire safety in parks), the central route to persuasion appears to be the preferred influence strategy. If the goal is immediate on-site formation of a new attitude, even if it is ephemeral (e.g., attitudes toward one park trail over another), the peripheral route may prove acceptable.

Influence via the central route requires that the recipient of the new information have the motivation and ability to process it. 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 primarily for peripheral cues. Many people in the population may feel that the messages generated by recreation and tourism strategists are not relevant to them or have few consequences for them. An important goal of any persuasion strategy aimed at enduring change will be to increase people's motivation to think about the messages by increasing the perceived personal relevance of the communications or employing other techniques to enhance processing (e.g., ending arguments with questions rather than statements).

Even if people are motivated to attend to and think about the messages, it is also critical that they respond to these messages with favorable cognitive and/or affective reactions. It is likely that different types of information will evoke favorable responses from different segments of the population. For example, people scoring high on the self-monitoring scale respond favorably to "image" and "status" arguments, whereas low self-monitors respond favorably to "quality" arguments (Snyder and DeBono 1985, see also Manfredo, Bright and Haas this volume). Much research is needed on the level of complexity to present to different audiences, and on 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 skills or confidence necessary to implement their new attitudes. People need to be encouraged to think before they act so that their *new* attitudes, rather than old habits or salient situational cues, are accessed. Alternatively, a person may form an appropriate new attitude, but if the person's personal experiences contradict the attitude (e.g., a message convinces a person that some behavior is harmful and bad, but prior or subsequent experience suggests that it is exciting and fun), two contrary attitudes are formed: "this behavior is supposed to be bad" and "this behavior is fun." Since beliefs and attitudes based on direct experience come to mind more readily than attitudes based solely on externally provided information, the effectiveness of the new attitude is at a competitive disadvantage (Fazio and Zanna 1981). To the extent that these effects are anticipated, educational programs can incorporate role-playing and other direct experiences in which people receive appropriate practice exercises.

Research on social influence has come a long way from the early notion that providing information alone was sufficient to influence behavior. Social influence is a complex, though 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, such as central versus peripheral routes, and that some attitude changes are more accessible, stable, resistant and predictive of behavior than others. We also know that even apparently simple variables such as a likable source or a person's mood can produce persuasion by very different processes in different situations. We hope this overview of current thinking about attitude change processes may be useful in developing and evaluating persuasive communications that are relevant to recreation and tourism.

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