PERSUASION
Psychological Insights and Perspectives

Edited by

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Hamlet is reading a magazine. His eye is caught by an ad for the Great Dane sword. The ad pictures Fortinbras raising the sword in battle. The ad proclaims:

10 REASONS WHY THE GREAT DANE OUTPERFORMS ITS COMPETITORS

The ad continues:

REASON #1—BECAUSE OF ITS SHARPER BLADE, THE GREAT DANE KILLS FASTER AND MORE DECISIVELY.

Hamlet, who had never heard of the Great Dane before, thinks to himself:

I need a sword that kills quickly and decisively. With such a mighty sword, I could rectify wrongs that have been committed. By rectifying the wrongs,
there would be one less villainous, adulterous, murderer of kings. After I have rectified the wrongs, I would be free of these thoughts that are driving me mad. Yes, a sword that kills faster and more decisively is precisely what I need.

Hamlet continues to read the other nine reasons, thinking about each in a manner similar to the way in which he thought about the first. Laertes is reading the same magazine, and his eye is also caught by the Great Dane ad. Laertes, who was also unfamiliar with the Great Dane, thinks to himself:

Fortinbras looks very fierce in this picture, and many advantages of the Great Dane are listed. It must be a fine sword.

Laertes continues past the ad, without stopping to read any of the arguments.

In the scenario above, if we had assessed Hamlet’s and Laertes’s attitudes toward the Great Dane sword before and after they were exposed to the ad, it is probable that we would have observed attitude change in both of them. That is, both may have changed from a neutral or slightly negative attitude toward the Great Dane before reading the ad (sometimes we are skeptical of things with which we are unfamiliar) to a very positive evaluation after the message. For example, both Hamlet and Laertes might have rated the Great Dane a “4” on a 9-point scale (1 = very unfavorable; 9 = very favorable) before looking at the ad, but an “8” afterwards. But what do these “8’s” mean? Clearly, Hamlet spent more time thinking about the sword than did Laertes. And the nature of Hamlet’s thoughts was quite different than the type of thinking that Laertes did about the sword. But does the quantity and quality of thinking matter? After all, both Hamlet and Laertes rated the sword an identical “8.”

Current research on persuasion suggests that, indeed, the amount and nature of the thinking matters greatly. The purpose of this chapter is to describe a theory of persuasion that says that not all attitude changes that look the same really are. This theory, called the Elaboration Likelihood Model (or ELM, for short), says that the amount and nature of the thinking that a person does about a persuasive message (such as an advertisement) has an important influence on the kind of persuasion that occurs (Petty & Cacioppo, 1981, 1986). By the end of this chapter, you should have a better understanding of why all “8’s” are not alike and also have a framework for appreciating why certain factors have the impact on attitude change that they do.

In order to understand the ELM, it is first important to understand an assumption that the ELM makes about the nature of humans in general. That assumption is that people have neither the ability nor the motivation to evaluate everything carefully. Think about it. You are a busy person with many things to do. Add to this busyness the fact that you live in a complex world. You will probably agree that you cannot take the time nor do you have the mental energy to analyze carefully each and every decision you make or piece of information you encounter.

But this causes a potential problem, because you, like other people, have hundreds of little decisions to make each day. For example, a trip to the typical super-
market confronts the shopper with over 25,000 possible items from which to select. Can the shopper read the labels on all of the products in a given category to find the one that has the best price, combination of ingredients, and the like? Of course not. Instead, people reserve their effortful thought processes and energy for those tasks that they feel are most deserving and those situations that permit time for reflection. In other instances, they rely on relatively simple cues in the situation, such as whether their favorite sports hero is pictured on the cereal box or how many reasons are listed to buy a product on an in-store display. This is the strategy that Laertes followed in forming his attitude about the Great Dane sword.

In the typical situation in which persuasion might take place, a person or a group of people (i.e., the recipient, or audience) receives a communication (i.e., the message) from another individual or group (i.e., the source) in a particular setting (i.e., the context). The communication usually presents reasons or arguments in favor of or against a particular object (e.g., the Great Dane sword), person (e.g., a presidential candidate), or issue (e.g., abortion). The message may be delivered in person or via some print (e.g., newspaper), audio (e.g., radio), or video (e.g., television) medium (i.e., the channel). For example, a team of attorneys may present the closing arguments for the conviction of an accused murderer to a 12-member jury in a packed and noisy courtroom, or a solitary child may sit in a tranquil bedroom and watch a commercial for a new sugar-coated cereal with a prize in the box. Each of the various aspects of the persuasion situation (i.e., source, message, recipient, channel, context) has been studied in depth and has been shown to be of some importance in influencing attitudes (McGuire, 1969, 1985). In this chapter, we will explain how these factors or variables work to produce persuasion by using the ELM.

Overview of the Elaboration Likelihood Model (ELM) of Persuasion

The ELM is based on the notion that people want to have correct attitudes and beliefs, since these will normally prove to be most helpful in dealing with everyday problems. For example, if we liked evil people or thought highly of shoddy products, we surely would have difficulties. The ELM describes two rather different ways by which a person might come to hold a reasonable attitude (i.e., one that seems right to the person). One procedure, referred to as following the central route to persuasion, involves carefully thinking about and examining information pertinent (or central) to the merits of a topic. The second strategy, called the peripheral route to persuasion, involves less cognitive effort and occurs when a person relies on a relatively simple cue in the situation, such as whether the source appears to be an expert or whether a product comes in an attractive package (i.e., relying on information that permits a reasonable decision without requiring the person to undertake a careful and effortful analysis of the true merits of the issue or product). (Recall that, in describing the ways that attitudes can guide behavior, Fazio and Roskos-Ewoldsen in Chapter 4 also distinguish between two processes that differ in the cognitive effort required.)
The Central Route to Persuasion

Consider Hamlet’s thoughts in response to the Great Dane advertisement. Hamlet relates the information in the ad (e.g., “Kills faster and more decisively”) to knowledge and information that he already possesses (e.g., “Wrongs that have been committed”) to arrive at new ideas that were present neither in the ad nor in his previous knowledge (e.g., “I would be free of these thoughts that are driving me mad”). This type of thinking is called elaboration and is the hallmark of the central route to persuasion.

The effortful elaboration that is necessary to take the central route involves paying careful attention to the relevant information in the message and relating that information to previous knowledge stored in memory (e.g., Is the message consistent or inconsistent with other facts that I know?) and generating new implications of the information (e.g., What does this mean for my life?). The ultimate goal of this effort is to determine if the position taken by the source has any merit. For example, consider the advertisement encountered by Hamlet and Laertes. One of the arguments presented was that it was a good sword because of its sharper blade. In addition, the argument continued that, because of the sharp blade, the sword had the potential to kill faster and more decisively. The thoughts that a person has in response to an argument are often referred to as cognitive responses (Greenwald, 1968; Perloff & Brock, 1980; Petty, Ostrom, & Brock, 1981). These cognitive responses might be favorable toward the message (e.g., “With such a mighty sword, I could rectify wrongs that have been committed”), or they might be unfavorable (e.g., “I need a sword strictly for fencing. Having a sharp blade is the last thing that I need”). The process of elaboration, or generating cognitive responses, may be thought of as a private dialogue in which the person reacts to the information presented (Festinger & Maccoby, 1964) (see Figure 6-1).

As we will describe shortly, considerable research supports the view that persuasion may depend on the nature of the thoughts generated in response to a message. In general, we will refer to the act of generating issue-relevant cognitive responses to a message in an attempt to assess the true merits of the position taken as following the central route to persuasion.

In order to evaluate the merits of the arguments presented in a message, a person has to be both motivated and able to do so. Not every message is sufficiently interesting for us to think about, and not every situation provides us with sufficient time for careful reflection. When people are motivated and able to follow the central route, they carefully appraise the extent to which a message provides information that is fundamental or central to the true merits of the person, object, or issue under consideration. Of course, the particular type of information that is perceived central to the merits of any particular issue may vary from person to person and from situation to situation (cf., Katz, 1960). For example, research has shown that when some people think about the topic of capital punishment, religious considerations and arguments are particularly persuasive, but for others, legalistic arguments carry the most weight (Cacioppo, Petty, & Sidera, 1982). Likewise, research has shown that when evaluating consumer products, some people are particularly
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FIGURE 6-1 People are sometimes very active processors of the messages that they receive. The thoughts that a message elicits can be favorable, unfavorable, neutral, or some combination of these.

Source: Drawing by Modell; © 1975 The New Yorker Magazine, Inc.

cconcerned about how usage of the product will affect the image that they project; for other people, this dimension is unimportant (Snyder & DeBono, 1985, 1989). Just as people may differ in the dimensions central to their attitudes, different situations may cause different attributes to be central. For example, in judging a person’s prospects for admission to graduate school, intelligence is central, whereas attractiveness is not. On the other hand, when judging the same person’s prospects for a modeling career, the opposite may hold.

The important point here is that sometimes attitudes are formed or changed by a rather thoughtful process in which people carefully attend to the arguments presented, examine them in light of their relevant experiences and knowledge, and evaluate them along the dimensions they perceive to be central to the merits of the objects.1 Attitudes formed via this central route are expected to have a number of distinguishing characteristics. In particular, these attitudes are expected to be (a) relatively easy to be called to mind (accessible); (b) relatively persistent and stable
over time; (c) relatively resistant to challenge from competing messages; and (d) relatively predictive of the person’s attitude-relevant behavior.

The Peripheral Route to Persuasion

Consider Laertes’s thoughts in response to the advertisement. Laertes’s thoughts focus primarily on the endorser of the sword and the mere number of features the sword is said to have. Thus, Laertes’s attitude is not the result of effortfully considering the actual merits of the information about the sword! Instead he is relying on the simple cues of source attractiveness and message length. The type of attitude formation and change that occurs in the absence of effortful message elaboration is referred to as taking the peripheral route to persuasion. But why would anyone form or change an attitude based solely on information such as who is pictured with a product and how many reasons appear to favor it?

The peripheral route to persuasion recognizes that it is neither adaptive nor possible for people to exert considerable mental effort in thinking about all of the persuasive communications to which they are exposed (cf., Miller, Maruyama, Beaber, & Valone, 1976). Just imagine if you thought carefully about every television or radio commercial you heard or ad you came across in newspapers or magazines. If you ever made it out of the house in the morning, you probably would be too mentally exhausted to do anything else! In a perfect world, we might hold opinions only on those topics that we had considered carefully. As we noted above, however, this ideal is impossible because, in the course of daily life, we are called upon to express opinions and to act on issues that have little direct interest to us and about which we have had little time to think.

In order to function in contemporary society we must often act as “lazy organisms” (McGuire, 1969) or as “cognitive misers” (Taylor, 1981). This means that we must at times have some relatively simple means for deciding what is good and what is bad. For example, consider a patriotic American who is watching television when an ad comes on for one of the many candidates in the Democratic primary election for the House of Representatives. In a sincere voice and with the American flag in the background, the candidate gives his views on domestic spending priorities. Since it is several months before the election and our television viewer is an “independent” voter who does not plan to vote in the primary anyway, there little reason for him to think about the message carefully. Imagine that following the commercial, the phone rings and the viewer is asked to respond to a political poll. The viewer reports a favorable attitude toward the candidate, not because of an evaluation of the views expressed toward domestic spending but because the sincere voice and the American flag triggered positive associations or allowed a simple inference that the candidate was probably worthy. Thus, both our television viewer and Laertes formed their attitudes via the peripheral route. That is, their opinions are the result of their use of simple cues rather than thinking about the substantive arguments presented.

According to the ELM, attitudes formed or changed via this peripheral route are less accessible, persistent, resistant, and predictive of behavior than are attitudes formed or changed by the central route. Figure 6-2 diagrams the two routes
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FIGURE 6-2 The two routes to persuasion. This diagram depicts the possible endpoints after exposure to a persuasive communication according to the Elaboration Likelihood Model (ELM) (i.e., central attitude change, peripheral change, no change).

to persuasion. It shows that the central route occurs when people possess both the motivation and ability to elaborate carefully the arguments presented but that the peripheral route is more likely to occur when either motivation is low or ability is impaired.

**Evidence for the Two Routes to Persuasion**

According to the ELM, then, the likelihood of elaborating on a persuasive communication (or elaboration likelihood), as determined by a person’s motivation and ability to think about the arguments in the communication, determines the route to persuasion. When the elaboration likelihood is high (i.e., a person is both motivated and able to process a communication), the central route to persuasion occurs, but as the elaboration likelihood decreases, the peripheral route becomes more powerful.

Research on the ELM has proceeded in several stages. First, attempts were made to demonstrate that numerous variables could have an impact on persuasion by affecting the extent to which people were motivated or able to think about the arguments in a message. Next, studies demonstrated that the impact of peripheral cues on persuasion would be greater when the elaboration likelihood was low rather than high. Finally, evidence was obtained for the different consequences of the two routes to persuasion. For example, did central-route attitudes really last longer than peripheral-route attitudes? Each of these streams of research is described in the following sections.

**Modifying Attitudes by Affecting Message Elaboration**

One of the most important and integrative principles of the ELM is that variables can affect persuasion by affecting how much thinking a person is doing about a message (a lot or a little) and what kinds of thoughts (favorable or unfavorable) are generated in response to the message. Table 6-1 presents a way of categorizing variables that affect message elaboration.

As shown in Table 6-1 (and also Figure 6-2), we can distinguish variables that affect motivation to process a message from those variables that affect ability to process. Simply stated, variables influencing motivation are those that affect a person’s rather conscious intentions and goals in processing a message. In other words, do people choose to exert the necessary effort to process the message arguments? In contrast, the question of ability is one of whether the person has the necessary skills, knowledge, and opportunity to evaluate the message. Motivational and ability variables can be further divided into (1) those variables that are part of the persuasion situation versus those that are part of the individual recipient of persuasion and (2) those variables that affect the amount of thinking (i.e., increasing or decreasing thinking in a relatively objective manner) versus those variables that motivate or enable a bias to the thinking that is underway (i.e., making it more or less favorable than it otherwise would be). We will deal with each of these distinctions.
TABLE 6-1  Categorization and examples of factors affecting elaboration likelihood

<table>
<thead>
<tr>
<th>Motivational Factors</th>
<th>Ability Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Situational</td>
<td>Dispositional</td>
</tr>
<tr>
<td>Relatively Objective</td>
<td>Personal relevance</td>
</tr>
<tr>
<td>Processing</td>
<td></td>
</tr>
<tr>
<td>Relatively Biased</td>
<td>Forewarning</td>
</tr>
<tr>
<td>Processing</td>
<td>of intent</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Head movements</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from Petty, Unnava, & Strathman, 1991.

Situational Impact on Motivation to Think

What are some of the possible situational variables that might have motivated Hamlet to scrutinize the Great Dane ad more than Laertes? One possibility is that Hamlet had been thinking about purchasing a sword before he ever saw the ad. That is, he already intended to buy a sword and was trying to decide which sword to buy. This intention rendered the ad more personally relevant to Hamlet. Laertes, on the other hand, had no intention of purchasing a sword, so the ad had little personal relevance to him. Could self-relevance be a difference that led Hamlet to process the ad more than Laertes?

Some of the persuasive messages that we confront have direct personal implications for our lives, whereas others do not. For example, a new proposal to raise the state sales tax affects mostly nature lovers; and a proposal to prohibit having alligators as pets affects hardly anybody. People should be especially motivated to think about proposals with direct personal implications. After all, if we can process only a limited number of the many communications we receive, it would be most adaptive to devote the most time and energy to those with the most personal consequences (Petty, Cacioppo, & Haugtvedt, 1992). (See, for example, the research on vested interest reviewed by Fazio and Roskos-Ewoldsen in Chapter 4.)

If people were divided into groups for which a message was either high or low in personal relevance, which group would be easier to persuade if we wanted to produce persuasion by the central route? Since the central route requires extensive thinking about the information presented, and high relevance should enhance thinking, it would seem that this group would show more persuasion. However, this reasoning assumes that the thoughts (elaborations) generated in response to the message are favorable, such as would be the case if the message presented arguments that were compelling when scrutinized. What if the message contained arguments that were not very persuasive and did not hold up under a careful examination? If people in the high-relevance group are engaged in considerable thought about weak or spurious arguments, they should show less agreement than a group that is not thinking about the arguments because they will better realize the flaws in the message.
Testing this reasoning requires developing two sets of arguments on some topic. For example, in one study, both strong and weak arguments were developed on the topic of instituting a comprehensive exam for college seniors (Petty & Cacioppo, 1979b). The comprehensive exam was described as a test of what students had learned in their major area, and passing it was proposed as a requirement for graduation. Not surprisingly, most undergraduates were initially opposed to the institution of these exams. However, a message with strong arguments was developed to elicit mostly favorable cognitive responses when the students were instructed to think about them. For example, the strong arguments pointed out, among other things, that job placements and starting salaries improved at colleges with the exams. In stark contrast, a set of weak arguments was designed to elicit mostly unfavorable cognitive responses. The weak messages argued, for example, that the exams should be instituted because parents wanted them and that the exams were a tradition dating back to the ancient Greeks. As you might expect, when students were asked to think about these reasons for instituting the exams, their thoughts were quite negative.

Although preliminary testing assured that students were able to distinguish the strong from the weak arguments when they were instructed to do so, it said nothing about whether increasing the personal relevance of the message would make them more likely to think spontaneously about the implications of the arguments and form attitudes based on these thoughts. The ELM hypothesis, of course, was that when the message was high in personal relevance, the students would naturally scrutinize the arguments even when they were not instructed to do so, but when the message was low in personal relevance, devoting effort to thinking about the arguments would be less likely.

Given that strong and weak messages on the topic of senior comprehensive exams were developed successfully, the experiment next required a procedure to vary whether the message was perceived as being high or low in personal relevance. To accomplish these differences in personal relevance, some of the students (high-relevance group) were led to believe that the exam proposal was for their own university whereas other students (low-relevance group) were led to believe that the exam proposal was for a comparable but distant university (cf., Apsler & Sears, 1968). All of the participants in the study were told that their job was to rate the “sound quality” of radio editorials about the proposed exam that were sent to the journalism school from universities throughout the nation. These instructions were given so that complying with the study would not require thinking about the content of the message. Each participant sat in a private cubicle and was randomly assigned to listen through headphones to one of the four editorials required by the experimental design (high relevance with strong arguments; high relevance with weak arguments; low relevance with strong arguments; low relevance with weak arguments). Following exposure to one of the messages, the students were asked to list the thoughts they had while listening to the tape (see Cacioppo & Petty, 1981, for a description of the thought-listing procedure).

The attitude results from this study are graphed in Figure 6-3. Just as expected, when the speaker advocated that the exams should be instituted at a distant uni-
...parts on some aspects of the message were developed by the experimenter (Petty & Cacioppo, 1979). For example, a requirement was that students be aware of what student government was a requirement for their graduation. The experimenter also instructed students to evaluate the strength of the arguments presented. For example, one group was instructed to evaluate the strength of arguments presented when personal relevance was high and another group when personal relevance was low. As you will see in the figure, the students were asked to evaluate the arguments when personal relevance was high.

The figure shows that students were able to distinguish between strong and weak arguments. To do so, they rated the strength of the argument on a 9-point scale. The argument was presented in a slide, and the students were asked to evaluate the strength of the arguments presented. The students were instructed to rate the strength of the arguments presented when personal relevance was high and another group when personal relevance was low. As you will see in the figure, the students were asked to evaluate the arguments when personal relevance was high.

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![Figure 6-3](image)

**FIGURE 6-3** Postmessage attitudes as a function of personal relevance and argument quality. The figure shows that argument quality is a more important determinant of persuasion when personal relevance is high rather than low.

*Source:* Data from Petty & Cacioppo, 1979b, experiment 2.
*Note:* Data presented on transformed metric.

University (i.e., low personal relevance), the students' attitudes were not affected very much by whether the speaker provided strong or weak arguments. However, when the message was of high personal relevance, argument quality was an important determinant of attitudes. Also, the thoughts that the students listed after message exposure suggested that the more extreme attitudes were accompanied by more extreme thoughts. That is, when the arguments were strong, students exposed to the high-relevance message produced more than twice as many favorable thoughts as low-relevance subjects, even though both groups were exposed to the *identical* arguments. When the arguments were weak, high-relevance subjects generated almost twice as many unfavorable thoughts as subjects exposed to the low-relevance version of the message.

Because the pilot testing for this study showed that the students were capable of distinguishing the strong from the weak arguments when they were instructed to do so, the study indicates that people become more likely to engage *spontaneously* in this effortful evaluation process as the perceived personal relevance of the message increases (Petty & Cacioppo, 1990). That is, as the personal relevance of a message increases, individuals are more likely to decide to think about the message on their own. In fact, research suggests that simply changing the pronouns in a message from the third person (e.g., *one or he and she*) to the second person (e.g., *you*) is sufficient to increase thinking about the message.
(Burnkrant & Unnava, 1989). This fact has not been lost on advertisers, of course, who have made extensive use of advances in computer-assisted mailings to individualize and personalize the messages they send to potential customers (see Figure 6-4).

Although the personal relevance of a message is a major determinant of people’s motivation to think about the arguments presented, it is not the only one. Studies have uncovered several other factors that can be employed to increase the elaboration likelihood. For example, when people believe they are the only ones responsible for judging a message, they exert more effort in thinking about it than when they are part of a group that is responsible. As a result, the quality of the arguments in a message has a greater impact on the attitudes of individual rather than group evaluators (Petty, Harkins, & Williams, 1980).

Apparently, when people are jointly responsible for making an evaluation (such as when they are serving on a committee), they may feel that their input is less important or needed, and thus they work less hard (Harkins & Petty, 1982; Latané, Williams, & Harkins, 1979). In a similar vein, people put more effort into thinking about messages that come from multiple sources rather than just one source (Harkins & Petty, 1981). People appear to reason that information that comes from multiple sources is more likely to be valid and therefore worthy of processing than information that comes from only one person (Harkins & Petty, 1987).

As a final example, research indicates that when people are not normally motivated to think about the message arguments, more thinking can be provoked by summarizing the major arguments as questions rather than assertions (Petty, Cacioppo, & Heesacker, 1981). For example, rather than concluding your argument by saying, “And therefore, instituting comprehensive exams for seniors would increase the prestige of the university,” you could ask, “Wouldn’t instituting comprehensive exams for seniors increase the prestige of the university?” (See also Burnkrant & Howard, 1984; Howard, 1990.) Summarizing an argument as a question causes people to engage in greater thought about the merits of the argument.

The use of rhetorical questions, of course, could lead to more or less agreement with the advocated position, depending upon whether thinking about the argument leads to favorable or unfavorable cognitive responses. In the 1980 presidential election, Republican candidate Ronald Reagan asked voters whether they were better off now or four years ago. (The previous four-year term of Democrat Jimmy Carter was characterized by high inflation and interest rates.) By posing a question, Reagan likely achieved greater issue-relevant thinking (and negative attitudes toward the Carter administration) than if he had simply told voters that they were not better off (Myers, 1983).

**Individual Differences in Motivation to Think**

Could personality factors have accounted for the fact that Hamlet thought about the Great Dane ad to a greater extent than Laertes? Consider that, aside from the ad in the magazine, Hamlet ruminates about a wide variety of things, even when there is little situational motivation for him to do so. Consider also that Laertes, aside from the ad in the magazine, rarely thinks about things unless the situational motivation is intense. Is it possible that Hamlet thought about the ad more than
of course, the ad states that the message is personalized, which is not the only one.

The statistical support for an increase in perception of personalization is mixed, but there is evidence that personalized messages are more persuasive than non-personalized ones. In a study conducted by Petty and Cacioppo (1986), participants who received personalized messages were more likely to change their attitudes than those who received non-personalized messages. These results suggest that personalized messages are more effective in changing attitudes than non-personalized messages.

The key to effective personalized messaging is to tailor the message to the individual's needs and interests. This can be achieved by using customer data to identify the individual's preferences and then using that information to create a message that is relevant to them. By doing so, the message is more likely to be perceived as personal and therefore more persuasive.

Another important factor in the effectiveness of personalized messaging is the use of emotional appeals. Emotions are a powerful tool for changing attitudes, and personalized messages that appeal to the individual's emotions are more likely to be effective. For example, a message that highlights the benefits of a product to the individual's lifestyle is more likely to be persuasive than a message that simply lists the features of the product.

In conclusion, personalized messaging is a powerful tool for changing attitudes and behaviors. By tailoring the message to the individual's needs and interests and using emotional appeals, personalized messaging can be more effective than non-personalized messages. However, it is important to note that the effectiveness of personalized messaging depends on the individual's level of education and the context in which the message is delivered. Therefore, personalized messaging should be used in conjunction with other communication strategies to achieve optimal results.

FIGURE 6-4 Personalized messages are particularly effective in engaging information processing.

**NOTICE FOR RECEIPT**

From: R. K. Barnum, Gift Distribution Committee

Mr. & Mrs. Richard E. Petty
3104 Oaklawn Street
Columbia, MO 65203

Date Sent: September 17, 1993
Gift Processing #: "One Thousand"

Dear Mr. & Mrs. Petty,

Several weeks ago, we attempted to notify you of your selection in a sweepstakes program we were conducting. You and your family had been selected to represent the Mid- west region of the United States. What this meant was that you had either won the Chrysler Convertible or one of the other three gifts listed below:

1. Chrysler Convertible
2. 45" Giant Screen TV Projection System
3. $1,000 Cash
4. Electrasport Boat (claimed)

Note: Unless our records are incorrect, you did not claim your gift. Due to the nature in which you were selected, you will have one last opportunity to claim your gift.

Please note that the 10 foot Electrasport Boat has recently been claimed. Therefore, your gift is one of the three remaining gifts... which are:

1. Chrysler Convertible

   Don't buy that new car until you visit us.
   Equipped with automatic transmission, air, AM-FM radio/cassette player, and
   more. Available in the color of your choice.

2. 45" Giant Screen Projection System

   Enlarge your favorite programs as big as life. The dual lens system
   provides the ultimate in quality and clarity for your viewing pleasure.

(3) $1,000 Cash

   A gift that's always welcome. Treat
   yourself to that something special
   you've been waiting for!

IMPORTANT: To determine whether you'll receive the Chrysler Convertible or one of the other two final gifts, you must visit Lake View Resort, located near Branson, Missouri. When you meet the Details of Participation, visit any day except Wednesday. For your convenience, plan your visit at 10AM, 12 noon, 2PM, or 4PM.

If not claimed by October 13, 1993, this offer will be forfeited and reissued. Any special offer made is valid only on the day of your visit.

When you receive the Chrysler Convertible or the 45" Giant Screen TV Projection System, we ask that you allow us to use your name in our future promotions.

PS. The special Bonus Gift pictured is yours and will be presented at the time of your visit for your consideration in visiting and touring Lake View Resort.

URGENT: Bring this notice to Lake View Resort for your gift presentation. See reverse for Details of Participation, retails, odds and map.
Ability Factors That Affect Elaboration
What if Hamlet had come across the Great Dane ad while listening to the radio as he drove down a busy highway, rather than coming across the ad in a magazine? We already suspect that Hamlet is high in need for cognition and that the message is of high personal relevance to him. According to the analysis we have provided thus far, Hamlet clearly is motivated to think about the arguments in the commercial. However, what if, just as the message comes on, a thunderstorm arises? Ordinarily, this highly motivated prince would be able to think about the message and drive at the same time, since driving would engage few of his cognitive resources. However, the thunder, lightning, wet pavement, dark skies, and reduced visibility all make driving a more difficult and cognitively demanding task. The increased distractions of driving should render Hamlet less able to scrutinize the message, even though there is high motivation to do so. What should the effects of this distraction be on persuasion? As we shall see, distraction can sometimes actually improve the persuasiveness of a message. At other times, it can make a message less persuasive.

In order to understand the effects of distraction, it is important to realize that having the necessary motivation to process a message is not sufficient for the central route to persuasion to occur. People must also have the ability to think about the message—distraction may adversely affect this ability. As was the case with motivational factors, ability factors may be divided into those that are part of the persuasion situation and those that are best viewed as part of the individual (see Table 6-1). Since the amount of distraction can vary from situation to situation, distraction falls under the domain of situational ability factors.

Although the initial research on distraction showed that distraction sometimes increased and sometimes decreased persuasion, it was not particularly clear why these effects occurred (see Petty & Brock, 1981). The ELM approach is to ask: What is the expected effect of distraction on the thoughts people generate? Although some previous research had suggested that distraction might disrupt the process of counterarguing a message (see Figure 6-1; Festinger & Maccoby, 1964; Osterhouse & Brock, 1970), the ELM suggests a more general formulation. That is, distraction should disrupt whatever the dominant thoughts are to a communication, be they favorable or unfavorable. If the communication would normally elicit mostly unfavorable elaborations (counterarguments), distraction should disrupt these negative thoughts and result in greater agreement than if no distraction were present. However, if the communication would normally elicit mostly favorable elaborations, distraction should disrupt these positive thoughts and result in less agreement than if no distraction were present.

To test this analysis of distraction, college students were exposed to a message arguing that tuition should be cut in half at their university. In this study, the students listened over headphones to a message that contained either strong or weak arguments that were presented under conditions of either minimal or moderate levels of distraction (Petty, Wells, & Brock, 1976). In the moderate-level-of-distraction conditions, subjects were instructed to track the positions of X’s that were flashed rapidly on a screen before them. In the minimal-level-of-distraction condi-
tions, the subjects were given the same instructions. However, the X's were flashed at a much slower rate.

The attitude results from this study are graphed in Figure 6-6. As you can see, the effects of this distraction on persuasion were quite different depending upon the arguments in the message. When the message was weak, people who were distracted showed more agreement with the message than people who were not distracted! However, when the message was strong, increased distraction was associated with decreased influence. In addition, analyses of subjects' thoughts provided evidence for the view that distraction disrupted the predominant type of thought. When the message was strong, increasing distraction produced a significant decline in the number of favorable thoughts that subjects listed. When the message was weak, increasing distraction produced a significant decline in the number of unfavorable thoughts listed.

It is important to note that distraction had no effect on the number of message arguments that subjects could recall. This finding is interesting because it shows that, even though all subjects were equally aware of the arguments, as distraction increased, subjects were less able to think about the arguments and thus their attitudes were less affected by the strength of the information presented. Distraction, then, is an especially useful technique when one's arguments are poor because people may be aware that some arguments were presented (which is good for persuasion), but they may be unaware that the arguments were not very compelling.

**FIGURE 6-6** Postmessage attitudes as a function of distraction and argument quality. The figure reveals that distraction disrupts elaboration of the message.

*Source: Data from Petty, Wells, & Brock, 1976, experiment 2.*
Distraction, of course, is just one variable that has an impact on a person’s ability to think about a persuasive communication. A number of other factors can influence persuasion by modifying a person’s ability to process the message. For example, if a person were unable to realize the full implications of a message with one exposure, a few additional exposures might be beneficial for message elaboration. Repetition would only be helpful to persuasion, however, if the additional thinking resulted in the generation of more favorable thoughts. When weak arguments are repeated, additional exposures should lead to further thoughts that are unfavorable and, therefore, result in less persuasion (Cacioppo & Petty, 1989).

As noted in Table 6-1, individual as well as situational factors can contribute to a person’s ability to think about a message. For example, the higher a person’s level of intelligence, all else equal, the more a person should be able to appreciate the merits of a truly brilliant argument and the more proficient the person should be in detecting the flaws in feeble reasoning. Also, the more objective knowledge that people have about some topic, the more they should be able to distinguish strong from weak arguments. (See Chapter 7 by Wood and Stagner for more information about the effects of these factors on persuasion.)

Relatively Objective versus Relatively Biased Elaboration
Consider the possibility that Horatio, Hamlet’s good friend, has advised him to engage in some unusual behavior in public so that others will think he is mad. Specifically, Horatio tells Hamlet to move his head up and down throughout the entire day. As a result, when Hamlet reads the ad in the magazine, he is nodding his head up and down. Could something as simple as head nodding affect persuasion? If so, how? What if Hamlet had been shaking his head from side to side? We will address these questions shortly.

We have now seen that there are both situational and individual variables that can affect a person’s motivation and ability to process the arguments in a persuasive communication. Importantly, all of the variables that we have discussed so far have affected motivation or ability to process a message in a relatively objective manner. In the strictest sense, if a person is thinking in an objective manner, this means that the person is trying to seek the “truth,” wherever it might lead. Of course, there is no guarantee that attempting to be objective will actually lead to the truth. When a person has the ability to think about a message in a relatively objective or balanced manner, the person has the requisite skills and opportunity to consider the arguments impartially. This objective processing is what we strive for, though perhaps do not achieve, in jury deliberations, for example.

In contrast to this relatively objective processing, some variables impart a systematic bias to the information processing. That is, the variable encourages or inhibits the generation of either favorable or unfavorable thoughts in particular. When a variable affects processing in a biased fashion, this means that individual or situational factors make it more likely that one side of an issue will be supported over another.
Forewarning of Persuasive Intent. As shown in Table 6-1, variables that bias thinking can be divided into those that work by affecting motivation versus ability and those that are tied to situations versus individuals. A few examples should help to demonstrate how certain variables can bias a person’s thoughts about a message.

Consider first the effect of a variable labeled forewarning by persuasion researchers. Forewarning occurs when a message recipient is informed in advance about some aspect of the persuasion situation. One type of forewarning occurs when people are informed in advance that the speaker is deliberately going to try to persuade them (Papageorgis, 1968). For example, a defense attorney might think that it is effective to begin his opening remarks with confidence by explaining that, “Before the end of this trial, I am going to convince you that my client is innocent!” One possibility is that when people learn that someone is going to try to persuade them, they decide that they should exert some effort in scrutinizing the message in order to decide if it is worth accepting. However, research suggests that the thinking induced by a forewarning of persuasive intent does not proceed in this impartial manner. Instead, when confronted by a person who expresses a strong desire to change our attitudes, we become motivated to defend our positions, at least if the attitude threatened is important to us (Brehm, 1966).

In one experiment testing this hypothesis, students were either forewarned or not warned of the persuasive intent of a speaker featured in a taped radio editorial (Petty & Cacioppo, 1979a). Some subjects were told that the editorial “was designed specifically to try to persuade you and other college students of the desirability of changing certain college regulations” (forewarned group). Others were simply told that the tape was prepared as part of a journalism class project (unwarned group). The personal relevance of the message was also varied. Subjects were led to believe either that the change in regulations would be implemented at their university next year (high relevance) or 10 years in the future (low relevance). All subjects heard a message containing five arguments in favor of requiring seniors to take a comprehensive exam in their major area as a prerequisite for graduation. All of the arguments were selected on the basis of pretesting so that they would be strong. Following exposure to the message, subjects expressed their own opinions and listed their thoughts.

Figure 6-7 presents the attitude results from this study. When the issue was low in relevance, the warning had no impact on attitudes. However, when the issue was of high relevance, the forewarning reduced persuasion. Under high relevance, the warned group generated over twice as many negative thoughts and half as many positive thoughts as the unwarned group. It is important to note that the warning reduced the persuasive impact of the message under high-relevance conditions, even though the message arguments were strong. Figure 6-7 shows quite clearly the very different effects of personal relevance and forewarning on attitude change. When the subjects were not warned, increasing personal relevance increased persuasion. This finding replicates the study graphed in Figure 6-3 and is to be expected if increasing personal relevance enhances the relatively objective processing of the strong message arguments. However, when the forewarning of
persuasive intent was combined with personal relevance, the increased processing took on a negatively biased tone.\footnote{7}

**Other Variables That Bias Thinking.** Just as some variables (such as forewarning of persuasive intent) affect a person's motivation to generate one kind of thought over another, other variables affect a person's ability to generate particular kinds of thoughts. For example, in one study, it was found that positive attitudes toward a message were facilitated when students were instructed to move their heads in a vertical (up-and-down) fashion but that negative attitudes were encouraged when students were instructed to move their heads in a horizontal (side-to-side) fashion during the presentation of a message (Wells & Petty, 1980). This rather unusual manipulation was introduced without suspicion by leading the subjects to believe that they were participating in a consumer test of the performance of some new headphones designed for people engaged in movement (e.g., exercise, dancing). The student subjects put on their headphones and began to move their heads as instructed (up and down or side to side) when an editorial was presented during the radio program they were listening to. How were attitudes affected by the head movements?
The results of the study were consistent with the hypothesis that vertical head movements facilitate the production of favorable thoughts (since people are used to thinking positive thoughts when they move their heads up and down) but are incompatible with and disrupt the production of unfavorable thoughts. The opposite holds for horizontal head movements (since people are used to thinking disagreeing thoughts when moving their heads from side to side). Thus, returning to Hamlet, it is probable that Hamlet's head nodding resulted in the generation of more favorable cognitive responses than if he had made no movements while reading the message. If he had been told by Horatio to shake his head from side to side, his cognitive responses would have been more negative than without any movements and the amount of persuasion would have been reduced.

Finally, it is important to note that just as situational variables such as a forewarning and head movements can bias thinking, so, too, can individual variables. For example, consider two people, Jack and Jill, who have the same attitude toward a political candidate, but Jill has much more information in support of her opinion than does Jack. Both encounter a strong attack on their favored candidate from an opposition leader. It would probably not surprise you much to learn that Jill is affected less by this attack than is Jack. Since Jill has more information behind her attitude, she is better able to counterargue messages that are opposed to her view and defend those that are consistent with it (e.g., Lord, Lepper, & Ross, 1979; Wood, 1982). However, if people have much information on an issue but the information does not consistently support their attitudes, such as if their feelings and their beliefs are inconsistent with each other (Chaiken, 1985; Rosenberg, 1960), then they should have a more difficult time defending their positions from attack than if the informational basis of their attitudes is consistent. (Chapter 7 in this book describes the important role of an attitude's information base in conferring resistance to persuasion.)

So far in our discussion of the variables that affect thinking about a persuasive message, we have considered the effect of each variable in isolation. In many real-life contexts, however, many variables are operating jointly to determine the extent of thinking. Also, many variables that can be separated in the laboratory often occur together in the natural environment. For example, people who like to think about issues (high need for cognition) will tend to have more information on a topic than people who do not like to think (Cacioppo, Petty, & Rodriguez, 1986). Also, people will tend to have more information about issues that are personally relevant than issues that are irrelevant (Wood, 1982). Thus, in order to assess how much thinking a person will do in any particular persuasion situation and whether that thinking will be relatively objective or biased, it is necessary to consider all of the categories of factors outlined in Table 6-1.8

Modifying Attitudes by the Use of Peripheral Cues

Now that it is clear that numerous variables can have an impact on persuasion by affecting the amount of thinking and whether that thinking is relatively objective or biased, we can turn to persuasion effects that occur in the absence of much thinking
about the issue. We have seen that when individual and situational factors produce a high likelihood of thinking, persuasion effects depend on the nature of the issue-relevant thoughts elicited. Whether the thoughts are largely favorable or unfavorable will depend on the quality of the arguments provided and the operation of any biasing factors. On the other hand, when the elaboration likelihood is low, persuasion should be a function of the peripheral cues in the persuasion context.

For example, Laertes formed a favorable attitude toward the Great Dane sword without thinking about the arguments presented. Instead, his attitude was based on the fact that a fierce warrior was pictured holding the sword and that many arguments were listed in the ad. Peripheral cues are aspects of a persuasion situation that allow attitude change in the absence of argument elaboration. Testing the idea that simple cues can affect attitudes when people are either unmotivated or unable to process message arguments involves comparing people's reactions to simple cues when the elaboration likelihood is high versus when it is low.

In one investigation of peripheral cues, college students were asked to listen to a message over headphones that advocated that seniors be required to pass a comprehensive exam in their major as a requirement for graduation (Petty, Cacioppo, & Goldman, 1981). Three variables were manipulated in the study: the personal relevance of the message, the quality of the arguments presented, and the expertise of the source. Relevance was manipulated as described before by having the speaker advocate either that the new exam policy should be instituted at the students' own university next year (high relevance) or 10 years in the future (low relevance). The students were exposed either to eight strong or eight weak arguments that were attributed either to a report prepared by a local high school class (low expertise) or to a paper prepared by the Carnegie Commission on Higher Education, which was chaired by a Princeton University professor (high expertise). The expertise of the source provides a simple cue that students might use to judge the validity of the message without evaluating the arguments themselves.

After the students heard the tape-recorded message, they rated their attitudes toward the exams. The attitude results from this study are presented in Figure 6-8. The graph in the left panel shows that when the message was of low personal relevance, increasing source expertise increased agreement, regardless of argument quality. Of most interest is the finding that even when the arguments were weak, having an expert present them led to more persuasion. In the right panel of the figure, it can be seen that when the message was of high relevance, source expertise had no significant impact on attitudes; only argument quality was important. The results suggest that when people are not motivated to think about a message (e.g., low personal relevance), they rely more on peripheral clues (e.g., source expertise) and are less affected by argument quality. On the other hand, when people are motivated to think about the message (e.g., high personal relevance), they are less affected by peripheral cues but instead are more influenced by the strength of the arguments.

Several similar findings have been reported. For example, in one study, students were presented with print advertisements for a new disposable razor. Some students were led to believe that the razor would soon be available in their town and that they would get to select one brand of razor as a gift at the end of the exper-
Low PERSONAL RELEVANCE

\[
\begin{array}{c}
\text{Favorable} \\
9 \\
7 \\
5 \\
3 \\
1 \\
0 \\
\text{Unfavorable}
\end{array}
\]

\[
\begin{array}{c}
\text{Strong Arguments} \\
\text{Weak Arguments}
\end{array}
\]

Source Expertise

High PERSONAL RELEVANCE

\[
\begin{array}{c}
\text{Favorable} \\
9 \\
7 \\
5 \\
3 \\
1 \\
0 \\
\text{Unfavorable}
\end{array}
\]

\[
\begin{array}{c}
\text{Strong Arguments} \\
\text{Weak Arguments}
\end{array}
\]

Source Expertise

**FIGURE 6-8** Postmessage attitudes as a function of personal relevance, argument quality, and source expertise. The left panel shows that attitudes are affected by source expertise under conditions of low personal relevance. The right panel shows that attitudes are affected by argument quality under conditions of high personal relevance.

*Source: Data from Petty, Cacioppo, & Goldman, 1981.*

Recall that Laertes responded not only to the attractiveness of the endorser of the Great Dane sword but also to the apparent number of arguments contained in the message. A similar approach was used in a recent automobile ad that proclaimed that there are “21 Logical Reasons to Buy a SAAB.” The ad went on to list the 21 reasons, ranging from technological advances to safety features to aesthetic concerns to price. It is unlikely that most people will think about *all* of these reasons, but the ad is impressive nonetheless. Will people be impressed by the fact that there are a large number of reasons to buy the car, or will the quality of the reasons make a difference?
Based on the research we have presented so far, it should be clear that the mere number of arguments should serve as a simple cue when the elaboration likelihood is low, but the number of arguments should be relatively unimportant when the likelihood of argument elaboration is high. In fact, this prediction has been supported. In a study that varied number of arguments, quality of arguments, and personal relevance (Petty & Cacioppo, 1984), it was found that increasing the number of either strong or weak arguments led to more persuasion when the personal relevance of the message was low. When relevance was high, however, increasing the number of strong arguments led to more persuasion, but increasing the number of weak arguments led to less persuasion. That is, the arguments were scrutinized when relevance was high and quality of arguments mattered. Under low relevance, all that mattered was the number of reasons given.

**Multiple Roles for Variables in the ELM**

We have now seen that there are two fundamentally different routes to persuasion. Before discussing the consequences of attitude changes by one route or the other, we will discuss an important contribution of the ELM—the idea that any one variable can assume more than one role.

First, variables can have an impact on persuasion by serving as *arguments*. An argument is a piece of information that says something about the true merits of the position taken. If the spokesperson for a beauty cream says, "If you use this cream you will look like me," the person’s beauty serves as relevant information for evaluating the effectiveness of the product. If a travel ad shows pictures of a beautiful beach and sunset and says, "Visit Maui," the stunning pictures provide a good reason to visit that location. That is, the attractiveness of the person and scene serve as issue-relevant arguments.

Second, these same variables can sometimes have an impact on persuasion, not by providing information relevant to the true merits of the object but by serving as *peripheral cues*. Consider an advertisement featuring an attractive person who says, "Get your next car loan at my bank," or an ad featuring a new car on a beautiful beach with a gorgeous sunset. Here the attractiveness of the source and beach scenery indicate nothing about the true merits of the bank or car but nevertheless may allow favorable attitude formation in the absence of a diligent consideration of the merits of the products. A person’s attraction to the source or scene may become attached to the bank and car by a simple association process (e.g., Staats & Staats, 1957). For example, you may have noticed how the pleasant feelings induced by a fine meal in a majestic setting may become attached to the person with whom you are dining, even though these feelings are really irrelevant to the merits of your companion.

A third way in which a variable can have an impact on persuasion according to the ELM is by determining the *amount of thinking* that you do about the message. For example, some people may be more curious about what an attractive person says than what an unattractive person says and do more thinking about the message when the arguments are presented by an attractive source (DeBono & Har-
that the mere presentation of a product or, argument on likelihood of purchase, was determinant when the argument has been supplemented with attractive arguments, and that the impact of the arguments on the personal or the peripheral cue, increasing from low to high, on the number of attractive arguments were scrutinized and studied. Under low

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... to persuasion. Regardless of whether the message was fair or the other, the impact of any one variable was.

Arguments. An appropriate illustration of the merits of the ELM is provided by a product that this cream or other, type of a beautiful product. If you decide a good reason for purchasing the scene serve as evidence.

In persuasion, the argument but by serving the attractive person by making a new car on a car but nevertheless at the sight of the source or scene serve as one process (e.g., pleasant feelings). The task of the persuasive argument, if it provides information central to the merits of the attitude object (Petty & Cacioppo, 1980), or may bias the ongoing information-processing activity. Finally, under conditions of moderate elaboration likelihood, source attractiveness will influence the amount of argument elaboration (DeBono & Har- nish, 1988; Puckett, Petty, Cacioppo, & Fisher, 1983). Conversely, some people may be put in such a good mood by pleasant scenery or may be so distracted by it that they fail to think about the arguments presented for the product (Mackie & Worth, 1989).

Finally, a variable can have an impact on persuasion by determining the kinds of thoughts that come to mind, or the bias in thinking (Petty & Cacioppo, 1990). For example, some people may be very biased against attractive people and try to counterargue and derogate everything they say. Other people may be fascinated with attractive people and attempt to find only good things in what they say. Similar biases in thinking can be induced by exposure to pleasant or unpleasant pictures that produce positive or negative mood states (see Petty & Wegener, 1991).

Implicit in the above discussion is that some variables can take on more than one role in persuasion situations. That is, certain variables have a chameleonic quality—they induce different processes in different situations. Thus, any given variable should not be thought of as exclusively fulfilling any one role. As seen in the example, the attractiveness of the source can function not only as an argument in some circumstances but as a peripheral cue in others, as a determinant of the amount of thinking in other situations, and as a determinant of bias in thinking in still other circumstances.

It is crucial to specify the general conditions under which variables such as source attractiveness act in each of the distinct roles. For source attractiveness, the available evidence can be summarized as follows: Under conditions of low elaboration likelihood, source attractiveness, if it has any impact at all, will serve as a peripheral cue (Haugtvedt et al., 1988). Under conditions of high elaboration likelihood, source attractiveness will not serve as a simple cue but may instead serve as a persuasive argument, if it provides information central to the merits of the attitude object (Petty & Cacioppo, 1980), or may bias the ongoing information-processing activity. Finally, under conditions of moderate elaboration likelihood, source attractiveness will influence the amount of argument elaboration (DeBono & Har- nish, 1988; Puckett et al., 1983).

As a second example, consider how a person's mood might affect persuasion in each of the ways postulated by the ELM. What if you heard a commercial in the context of a very pleasant television program? Would you like the product advertised any more than if you heard the same commercial in the context of a more neutral program? And if so, would your more positive attitude be the result of the central or the peripheral route to persuasion? In a study examining this question (Pettigrew, Schumann, Richman, & Strathman, 1993), subjects watched a commercial for a new pen that was embedded in either a pleasant program (an episode of the Bill Cosby show) or a neutral-mood documentary (about computers and robotics). Some subjects were led to believe that they would get to select one brand of pen as a free gift for participating in the study, so these subjects would presumably be motivated to think about the pen ad when it was presented (high elaboration likelihood group). Other subjects were led to believe that they would select their gift from a different product category, so they would not be particularly motivated to think about the pen ad (low elaboration likelihood group).
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Interestingly, both the high- and the low-elaboration groups were more positive toward the pen when the commercial was seen during the pleasant than during the neutral program. Importantly, mood produced the effect for different reasons in the high- and low-elaboration groups. When people were motivated to think about the pen ad, positive mood increased the number of favorable thoughts that they generated—that is, mood biased thinking. The more positive subjects felt, the more positive thoughts they generated, and the more favorable their attitudes were. When people were not motivated to think about the pen ad, however, mood had no effect on positive thoughts, even though it did have an impact on attitudes. That is, attitudes became more positive in the absence of favorable thinking about the merits of the pen.

What is going on here? When the elaboration likelihood is low, people appear to use their mood as a cue to how they feel about the message. Thus, they may come to agree with the message to the extent that they are feeling good or to disagree if they are feeling bad. When the elaboration likelihood is very high, on the other hand, and people are thinking about the message, mood appears to bias the kinds of thoughts that come to mind. That is, favorable thoughts come to mind more easily when you are feeling good, but more unfavorable thoughts come to mind when you are feeling bad (cf. Bower, 1981). This is similar to the idea that favorable thoughts are more likely to come to mind when you are moving your head up and down rather than from side to side.

What would happen if the elaboration likelihood were moderate rather than very high or low and the subjects were unsure as to whether the message was worth thinking about? Under these circumstances, some research suggests that a person’s mood determines how much thinking will occur (Bless et al., 1990; Mackie & Worth, 1989). For example, people in a good mood might deliberately decide not to think about the message, especially if they anticipate that such thinking would destroy their good mood (see Petty, Gleich, & Baker, 1991, for further discussion).

To summarize more generally, when the elaboration likelihood is low, people typically know that they do not want and/or are not able to evaluate the merits of the arguments presented. Thus, if any evaluation is formed, it is likely to be the result of the relatively simple associations or inferences permitted by variables serving as peripheral cues (e.g., source attractiveness, mood). On the other hand, when the elaboration likelihood is high, people typically know that they want and are able to evaluate the merits of the arguments presented. Thus, evaluations are formed as the result of careful argument scrutiny, and variables such as attractiveness and mood have relatively little impact as peripheral cues. Rather, these variables, if relevant to the central merits of the topic under consideration, can serve as persuasive arguments or, alternatively, bias the ongoing information-processing activity. Finally, when the elaboration likelihood is moderate, people may be uncertain as to whether the message warrants or needs scrutiny and whether they are capable of providing this analysis. In these situations, they may examine the persuasion context for indications of whether they should attempt to think about the message (e.g., Is this source worth listening to? How will the message make me
feel?). In short, in order to anticipate what role some variable will play in persuasion, it is important to know the overall elaboration likelihood.

**Consequences of the Route to Persuasion**

As we noted above, the existing research is quite consistent with the view presented in this chapter that there are two rather different routes to persuasion. One occurs when a person engages in a careful analysis of the arguments that are central to the true merits of the position advocated, whereas the other occurs when peripheral cues in the persuasion context produce attitude change without much argument scrutiny. Importantly, changes induced by these different routes may appear quite similar immediately after message exposure, but according to the ELM, attitudes formed by the two different routes should have quite different properties. The attitudes of Hamlet and Laertes are not really the same even though they are both “8’s.”

Recall that Hamlet processed the information in the Great Dane ad carefully because he planned to buy a sword in the near future and he is high in the need for cognition. Laertes had no current interest in purchasing a sword but reasoned that the Great Dane must be good because of the peripheral cues in the ad. According to the ELM, these two people have followed two very different routes to persuasion. Hamlet’s attitude is a result of diligently thinking about the features of the sword, but Laertes’s attitude is a result of making a simple inference about quality based on the cues featured in the ad.

The ELM predicts that the process responsible for attitude change has very important consequences. First, attitudes changed by the central route should last longer, all other things being equal, than attitudes changed by the peripheral route. In the relevant conditions of one study testing this hypothesis, college students were exposed to a message arguing for senior comprehensive exams under conditions of either high or low personal relevance (see Petty & Cacioppo, 1986). The message in this study contained strong arguments and was attributed to a prestigious and expert source. Attitudes were measured immediately after message exposure and again 10 to 14 days later under the guise of a phone opinion survey. A separate group of control subjects was not exposed to any message, but their attitudes were measured at the same points in time as the experimental subjects.

As shown in Figure 6-9, on the initial measure of attitudes taken right after the message, both the high- and low-relevance groups became more favorable toward the exams than the control group. In fact, both the high- and low-relevance groups changed to the same extent (just as Hamlet and Laertes change the same amount). Based on what you know about the ELM so far, however, you would expect these changes to have occurred for different reasons. That is, the high-relevance subjects presumably became more favorable because of carefully thinking about the strong arguments presented, but the low-relevance group presumably became more favorable because of the expert source who endorsed the exams.

More interesting is what happened when attitudes were assessed again two weeks later. An analysis of the attitudes of subjects in the high-relevance group
showed that their newly favorable attitudes remained relatively stable over time. However, an analysis of the attitudes of subjects in the low-relevance group revealed a lack of persistence. They were no longer any more favorable than the subjects who received no message at all! In short, the high-relevance subjects who formed their initial attitudes based on a careful consideration of issue-relevant arguments (central route) showed greater persistence of attitude change than the low-relevance subjects whose attitudes were based primarily on the source expertise cue (peripheral route). 

Recent research has also supported other consequences of attitudes changed by the central versus the peripheral route. Specifically, attitudes changed by the central route, in addition to lasting longer, have been shown to come to mind more readily and are more resistant when they are attacked than are attitudes changed by the peripheral route (e.g., Wu & Shaffer, 1987). In addition, people whose attitudes have been changed by the central route are more likely to act on their new attitudes than are people whose attitudes have been changed by the peripheral route (Cacioppo et al., 1986; Petty et al., 1983). These effects have been observed whether situational or personality factors influencing the route to persuasion have been investigated. So, people high in need for cognition, for example, show attitude changes that are more persistent over time and resistant to counterpersuasion than people low in need for cognition (Haugtvedt & Petty, 1992).
Conclusions

In this chapter, we have outlined two different routes to persuasion and have shown that variables can serve in several distinct roles in affecting attitudes. Importantly, the ELM suggests that different strategies will be more or less effective in producing change, depending upon the elaboration likelihood. Furthermore, just knowing a person's attitude will not always be sufficient, since the basis of the attitude change (either centrally or peripherally formed) can lead to drastically different consequences. That is, research supports the following different implications of attitudes changed by the central versus the peripheral routes. Central-route attitudes will (1) predict behavior better, (2) come to mind more easily, (3) last longer, and (4) be more resistant to counterpersuasion attempts. Thus, it is useful to know not only how positive or negative someone's attitude is but also the extent of message elaboration that formed that attitude. In other words, a critical issue for understanding persuasion is whether attitude change is a result of the central or the peripheral route to persuasion.

To think, or not to think? That was the question facing Hamlet and Laertes when they came across the Great Dane ad. Can you guess what the consequences were of the different strategies Hamlet and Laertes used to form their ratings of “8” on the scale of attitudes toward the sword?

As Hamlet's attitude was changed via the central route, he not only had a positive attitude toward the sword, but he purchased one that afternoon and practiced intensively, hoping to free himself of the thoughts driving him mad. In contrast, Laertes' attitude was changed via the peripheral route, and he did not purchase the sword.

The next day, Hamlet and Laertes engaged in a duel and were asked to choose among two swords—the Great Dane and Brand X. Because his attitude came to mind more readily, Hamlet reached quickly and confidently for the Great Dane, whereas Laertes hesitated, winding up with the Brand X.

When the duel began, Hamlet scored easily, wielding his sword with competence and practice.

Unfortunately, Laertes cheated, striking Hamlet with a poisoned sword between bouts. Hamlet, angered by this ungentlemannly act, grabbed Laertes’s sword and struck Laertes in a similar manner. Consequently, both died within minutes. Thus, no data can be given on the relative persistence or resistance of their attitudes.

Notes

1. Of course, this extensive scrutiny provides no guarantee that an objectively accurate opinion will be formed (see Petty & Cacioppo, 1986, for further discussion).

2. One type of peripheral process occurs when a person retrieves from memory a particular decision rule that can be used to evaluate the message (e.g., “Experts are usually cor-
rect, so I’ll go along”). This is referred to as heuristic processing, which is distinguished from the systematic processing that occurs under the central route (see Chaiken, 1987).

3. We consider this kind of personal relevance to be situational because it is a momentary relevance. When the situation changes, so does the relevance. That is, once Hamlet purchases a sword, new sword ads will no longer have the same relevance as when he was in a decision-making mode. On the other hand, the relevance that stems from a chronic interest in some issue (e.g., a parent who is always concerned about her child) is better thought of as contained within the person rather than the situation. Most of the older research on self-relevance examined chronic self-relevance (e.g., Sherif & Cantril, 1947; Sherif & Sherif, 1967; but see Krosnick, 1988), whereas much of the newer research examines situational self-relevance (see Petty, Cacioppo, & Haugtvedt, 1992). The effects of these variables are quite similar, however, in that, as self-relevance of either type increases, people pay more attention to the arguments in a message (see Johnson & Eagly, 1989; Petty & Cacioppo, 1990).

4. You may be wondering if people who differ in need for cognition also differ in intelligence. Although there is a modest correlation between need for cognition and verbal intelligence (as might be expected), need for cognition contributes independently to message processing and persuasion. Readers interested in learning more about need for cognition should consult Petty and Cacioppo (1984; 1986, Chapter 2).

5. For example, learning theorists emphasized that distraction should inhibit persuasion by decreasing learning and comprehension (e.g., Regan & Cheng, 1973), whereas dissonance theorists emphasized that distraction should increase persuasion, since people would feel a need to justify to themselves exerting extra effort to hear the message, especially if it was disagreeable (Baron, Baron, & Miller, 1973; see also Chapter 5 in this volume).

6. The first few exposures should be maximally beneficial to processing strong arguments. After all of the implications of the arguments have been realized with moderate repetition, increasing exposures become tedious and tend to elicit negative responses, regardless of argument quality. Tedium can be forestalled by varying the nature of the information provided in each repeated version of the ad, however. When the elaboration likelihood is low, peripheral cues should be varied, but when the elaboration likelihood is high, strong arguments should be varied for maximal effectiveness (Schumann, Petty, & Clemons, 1990).

7. A statement of the persuasive intent of a speaker is effective in reducing influence when it is presented before the message but not when it is presented after (Kiesler & Kiesler, 1964). This finding, of course, is consistent with the view that an indication of persuasive intent biases the processing of the message. When the statement of the speaker’s intent comes after the message, it is too late to bias thinking about the information presented.

8. It is important to note that often you just cannot add the effects of two variables to predict the result on elaboration. For example, research shows that for messages that are not self-paced (e.g., a message on radio), adding rhetorical questions to a message can increase elaboration mostly when people normally would not be thinking about the message (e.g., low-relevance message). On the other hand, adding rhetorical questions can disrupt elaboration if thinking ordinarily would have been high (e.g., high-relevance message; Petty, Cacioppo, & Heesacker, 1981).

9. Of course, variables other than personal relevance should be capable of influencing the power of simple cues to affect attitudes. In fact, any variable that decreases the elaboration likelihood should make the use of peripheral cues more likely. Thus, people who are low in need for cognition show more reliance on simple cues than people high in need for cognition (Axsom, Yates, & Chaiken, 1987; Haugtvedt, Petty, Cacioppo, & Steidle, 1988). People are also more likely to rely on simple cues when they lack the ability to think about a message, such as when the message is difficult to comprehend (e.g., Kiesler & Mathog, 1968;
Moore, Hausknecht, & Thamodaran, 1986; Ratneshwar & Chaiken, 1991) or when people have little or no prior information about the attitude object (e.g., Cacioppo, Marshall-Goodell, Tassinary, & Petty, 1992; Wood, Kallgren, & Priesler, 1985).

10. When the elaboration likelihood is high, people may also deliberately examine their mood to see if it is relevant to the attitude object. For example, reflection about the amount of fear that a message on AIDS has produced may help convince a person of how dangerous the consequences are (see Chapter 10 in this book).

11. For purposes of exposition, we have emphasized the central and peripheral routes as operating separately. This is true mostly at the high and low ends of the elaboration continuum. Of course, in many situations, the elaboration likelihood is moderate, and persuasion is determined in part by the central route and its processes and in part by the peripheral route and its processes.

12. In general, attitudes based on issue-relevant thinking should persist longer than attitudes based on simple cues. Two factors may produce exceptions to this principle, however. First, relative persistence may result from the repeated pairing of a peripheral cue with a particular position. These attitudes, though persistent in a vacuum, would likely be highly susceptible to counterpropaganda because people would have great difficulty defending their positions if attacked with strong arguments. Second, enduring attitudes may be classically conditioned with one exposure if the cue is sufficiently intense (e.g., fear of water may be conditioned by one near-drowning experience). Persuasive communications are rarely associated with such powerful cues, however.

13. The consequences of the route to persuasion may make it appear that the central route is invariably the attitude change strategy of choice, despite the potential difficulty in motivating and enabling people to think about the message. However, sometimes the peripheral route may be the only strategy possible. For example, there are some issues or objects for which there are few strong arguments (e.g., imagine trying to sell cigarettes with a high tar content). It is not surprising that, in these cases, ads typically contain hardly any information about the merits of the product (since there are none) but rather contain attractive endorsers or majestic scenery.

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