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Multiple Roles for Affect in Persuasion

RICHARD E. PETTY, FAITH GLEICHER, and SARA M. BAKER
Ohio State University

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Introduction

The major goal of this chapter is to describe a new and potentially integrative approach for understanding the role of affect in attitude formation and change. The idea that attitudes have affective as well cognitive and behavioral foundations has a long history in the social and behavioral sciences (Allport, 1935; McGuire, 1969) and is currently undergoing a renaissance in interest (e.g. Breckler and Wiggins, 1989; Millar and Tesser, 1986; Petty *et al.*, 1988a; Wilson *et al.*, 1989). Importantly, previous approaches to studying the role of affect in persuasion have tended to focus on the "one true process" by which affect determines attitudes, with different theorists emphasizing different processes (e.g. classical conditioning; cognitive priming; see Forgas and Bower, 1988, for a review). In contrast, our approach begins with the assumption that affect can influence attitudes in multiple ways in different situations. This assumption is a critical one in the Elaboration Likelihood Model of persuasion (ELM) (Petty and Cacioppo, 1981, 1986a).

In brief, the ELM holds that affect (like any other variable) can influence attitudes in the following ways: (a) by serving as an argument or item of issue-relevant information, (b) by functioning as a simple cue, (c) by influencing the extent of information processing activity, or (d) by influencing the type of thoughts that come to mind. The specific role in which a variable serves is influenced by the overall elaboration likelihood (how generally motivated and able recipients are to process the issue-relevant information that is presented). For example, in situations where the elaboration likelihood is quite low, a variable such as affect can influence attitudes by serving as a simple cue, increasing the favorability of the attitude when the mood is pleasant, but decreasing the favorability of the attitude when the mood is unpleasant. In other situations, affect influences attitudes in different ways. The ELM has been successful in accounting for a variety of source, message, and recipient variables in previous research and integrating what had appeared to be conflicting findings (Petty and Cacioppo, 1986b).

Diversity of initial findings on the effects of affect

The accumulated research on affect and persuasion over the past several decades has clearly indicated that individuals' evaluations of people, objects, and issues can be influenced by their feelings, moods, and emotions whether or not the affect is actually relevant to the attitude object under consideration. Many early empirical demonstrations revealed that evaluations of words, people, political slogans, and persuasive communications could be modified by pairing them with a variety of affect-producing stimuli. For example, when attitude objects were associated with pleasant food (Janis *et al.*, 1965; Razran, 1940), a comfortable room (Griffitt, 1970), a happy movie (Forgas and Moylan, 1987), or the termination of electric shock (Zanna *et al.*, 1970), subjects expressed more favorable evaluations than when the attitude objects were associated with unpleasant odors, a hot room, a sad movie, or the onset of electric shock (see Petty *et al.*, 1988b, for a review).

Although the vast proportion of research on affect and attitudes is generally consistent with the reasonable proposition that positive affective experiences and states tend to be associated with enhanced persuasion and more favorable attitudes, whereas negative affective states tend to be associated with reduced persuasion and less favorable attitudes (see McGuire, 1985), important exceptions to this principle exist (see Petty *et al.*, 1988). Notably, some research has shown that negative affect can be associated with increased persuasion and positive affect with reduced persuasion. For example, an early study by Weiss and Fine (1956) showed that subjects who had been angered by an insulting experimenter were more likely than subjects who had been complimented to agree with a message

calling for more punitive treatment of juvenile delinquents.* Perhaps the most notable instances in which negative moods have produced more favorable attitudes reside in the vast literature on fear appeals (see Rogers, 1983). Importantly, the conditions under which these different effects are likely to occur and the processes underlying them are only beginning to attract significant conceptual and empirical attention.

The complex and conflicting findings observed for affect present a situation similar to that which has existed for many other variables in the persuasion literature. For example, although the existing literature shows that increasing source credibility mostly increases persuasion, some investigations have demonstrated a reversal or no effect of credibility on attitudes. A complete understanding of the role of affect in persuasion requires an overall conceptual framework that accounts for the diverse effects of affect and other variables, and specifies the *processes* by which these variables modify attitudes.

Conceptualization and assessment of affect

Before presenting an analysis of the role of affect in persuasion, it is useful to distinguish affect from the constructs of "attitude" and "arousal." In this chapter we use "affect" as a superordinate construct to encompass emotions and relatively transient moods and feelings. Attitudes, on the other hand, refer to global and enduring (i.e. stored in long-term memory) *evaluations* of attitude objects (cf., Fazio, 1986).† A person's general evaluations or attitudes can be based on a variety of behavioral, affective, and cognitive experiences, and are capable of guiding behavioral, affective and cognitive responses. Thus, a person may come to like a new breakfast cereal because she or he just bought it ("If I bought it, I must like it"—behavioral influence), because a recently viewed commercial with pleasant music induced feelings of warmth (affective influence), or because the information in the commercial about the health benefits of consuming the product were persuasive (cognitive influence). An implication of this is that two global evaluations of an object, issue, or person that are identical when assessed on an overall favorable-unfavorable scale may be based on quite different experiences and may have quite different implications (Millar and Tesser, 1986).

Affective states may be viewed as having at least two components—

* Angered subjects also tended to agree less with a message advocating a more lenient foreign policy toward countries that disagreed with US policy toward China.

† Ephemeral, transitory, or self-presentational expressions of global evaluation would not be considered expressions of attitudes because they would not be reliable and enduring. Of course, the notion of an "enduring" attitude is a relative concept. That is, attitudes can endure for varying lengths of time. For example, attitudes based largely on exposure to simple cues tend to endure for a shorter period of time than attitudes based on extensive issue-relevant thinking (Petty and Cacioppo, 1986b).

intensity (how strong is the affect) and direction (is it positive or negative). Elevations in the intensity of affective states may be associated with increments in physiological (autonomic, cortical) arousal, but arousal is neither a requirement for nor a reliable indicator of affect. Affective states that are evoked by mildly pleasant and unpleasant stimuli can be accompanied by primitive expressions of emotion that are detectable even in the absence of diffuse autonomic arousal (see Cacioppo and Petty, 1987), and autonomic activity has been shown to accompany cognitive as well as affective responses (e.g. Lacey *et al.*, 1963). Although complete understanding of the role of affect in persuasion will require examination of both the intensity and the valence of affective states, in this chapter our focus is on valence rather than intensity.

The Elaboration Likelihood Model of Persuasion

Now that affect has been distinguished from the attitude (evaluation) and arousal concepts, we briefly describe the Elaboration Likelihood Model of persuasion and the manner in which it deals with affect. The ELM represents an attempt to integrate the many seemingly conflicting findings in the persuasion literature under one conceptual umbrella by specifying a finite number of ways in which source, message, recipient, context, and other variables have an impact on attitude change (Petty and Cacioppo, 1981; 1986b). The ELM is based on the notion that people want to form correct attitudes (i.e. those that will prove useful in functioning in one's environment) as a result of exposure to a persuasive communication, but there are a variety of ways in which a reasonable position may be adopted.

The most effortful procedure for evaluating an advocacy involves drawing upon prior experience and knowledge to carefully scrutinize and elaborate the issue-relevant arguments in the persuasive communication along the dimensions that are perceived central to the merits of the attitude object. According to the ELM, attitudes formed or changed via this *central route* are postulated to be relatively persistent, predictive of behavior, and resistant to change until they are challenged by cogent contrary information along the dimension or dimensions perceived central to the merits of the object. People attempting this effortful cognitive activity have been characterized as engaging in "systematic" (Chaiken, 1987) or "mindful" processing (Palmerino *et al.*, 1984).

Importantly, it is neither adaptive nor possible for people to exert considerable mental effort in processing all of the persuasive communications to which they are exposed. Indeed, people often act as "lazy organisms" (McGuire, 1969) or "cognitive misers" (Taylor, 1981). This does not mean that people never form attitudes when motivation and/or ability to scrutinize a message are low. Rather, the model holds that attitudes may be changed as a result of relatively simple associations (as in classical condition-

ing; Staats and Staats, 1958), identifications (Kelman, 1961); inferences (as in self-perception; Bem, 1972), or heuristics (such as "experts are correct"; Chaiken, 1987) in these situations. Attitudes formed or changed by this *peripheral route* are postulated to be relatively less persistent, resistant, and predictive of behavior.

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

The ELM holds that as the likelihood of elaboration is increased (whether the thinking is relatively objective or biased), the quality of the issue-relevant arguments presented has a greater impact on attitudes. As the likelihood of elaboration is decreased, however, peripheral cues become more important. That is, when the elaboration likelihood is high, the central route to persuasion dominates, but when the elaboration likelihood is low, the peripheral route takes precedence. There are, of course, many variables capable of moderating the route to persuasion. Some variables, such as personal relevance (Petty and Cacioppo, 1979b), personal responsibility (Petty *et al.*, 1980), and an individual's level of "need for cognition" (Cacioppo and Petty, 1982b) determine one's overall *motivation* to process issue-relevant arguments. Other variables, such as message repetition (Cacioppo and Petty, 1989) and distraction (Petty *et al.*, 1976) determine a person's overall *ability* to process issue-relevant arguments. Finally, some variables affect information processing activity in a relatively objective manner, whereas others may introduce a systematic bias to the information processing. For example, telling a highly involved audience that a message is specifically attempting to persuade them motivates active resistance and counterarguing (Petty and Cacioppo, 1979a).

One of the most important features of the ELM, is that it holds that any one variable can serve in multiple roles. That is, a variable can serve as a persuasive argument in some situations, act as a peripheral cue in others, and affect the intensity of thinking or the direction of processing bias in still other contexts. For example, in separate studies, source attractiveness has: (a) served as a simple peripheral cue when it was irrelevant to evaluating the merits of a consumer product (a typewriter) and subjects were not motivated to process the issue-relevant arguments (Haugtvedt *et al.*, 1988); (b) served as a message argument when it was relevant to evaluating the merits of a

product (a new shampoo) and the elaboration likelihood was high (Petty and Cacioppo, 1980); and (c) affected the extent of thinking about the message arguments presented when the elaboration likelihood was moderate (Puckett *et al.*, 1983).

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 personal relevance and knowledge are high, the message is easy to understand, no distractions are present, etc.), people typically know that they want and are able to evaluate the merits of the arguments presented and they do so. In high elaboration conditions, variables such as "attractiveness" have little direct impact on evaluations by serving as simple cues, but they may serve as persuasive arguments if relevant to the merits of the issue (such as when the attractiveness of a model serves as a relevant argument for a beauty product; or the physical beauty of a vacation destination serves as a compelling reason to visit that location). Alternatively, variables such as "attractiveness" may bias the nature of the ongoing cognitive activity when the elaboration likelihood is high. That is, when in a thinking mode, people may be especially motivated to find the good points in what a likable speaker has to say and the weak points in the message of a dislikable source. On the other hand, when the elaboration likelihood is low (e.g. low personal relevance or knowledge, complex message, many distractions, etc.), people know that they do not want and/or are not able to evaluate the merits of the arguments presented (or they do not even consider exerting effort to process the message). If any evaluation is formed under these conditions, it is likely to be the result of relatively simple associations or inferences. Finally, when the elaboration likelihood is moderate (e.g. uncertain personal relevance, moderate knowledge, moderate complexity, etc.), however, 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.

Affective Processes in the ELM

As noted in beginning this chapter, the accumulated persuasion literature clearly suggests that reactions to a persuasive communication can be modified by pairing the message with an affect-eliciting stimulus (Petty and Cacioppo, 1981; McGuire, 1985). However, the direction of the effects observed have sometimes appeared puzzling, and the processes mediating these effects have not been clear.

The ELM suggests several roles for affect in persuasion and indicates the

general conditions under which affect should assume each role. Specifically, the ELM holds that affect may serve as a persuasive argument, it may serve as a peripheral cue, or it may affect the extent or direction of argument processing (Petty *et al.*, 1988b). In the remainder of this section, each of these roles is explained.*

Affect under conditions of high elaboration likelihood

When the elaboration likelihood is high, people are motivated and able to process the merits of the issue-relevant arguments presented. Under these conditions, there are two possible roles for affect. First, affect could serve as an argument for the merits of the attitude object if it was relevant. For some people or in some situations or for certain attitude objects, a determination of the central merits of the object entails an analysis of one's *feelings* rather than (or in addition to) one's beliefs and behaviors. For example, attitudes toward a potential spouse might be based on the extent to which one feels love and warmth rather than disgust in his or her presence. In this instance, affect is serving as an argument (a relevant item of information) that is central to the merits of the object.†

In the example above, it was assumed that the affect was explicitly relevant to the merits of the attitude object under consideration and was therefore capable of serving as an item of issue-relevant information. *Irrelevant affect* may also have a role in persuasion under high elaboration conditions, however, if mood increases the accessibility of mood-congruent thoughts and ideas. Previous research is consistent with the view that positive moods cause other positive material in memory (e.g. thoughts, events, images) to come to mind, but negative moods increase the accessibility of negative material (Bower, 1981; Clark and Isen, 1982). Thus, when a person is actively processing a persuasive message while in a positive mood state, the ongoing elaboration should be positively biased, but when the person is in a negative mood, the elaboration should be biased in a negative manner. The biasing effects of mood should be especially strong if the message arguments are somewhat ambiguous and open to multiple interpretations, and the person does not have highly accessible attitudes and beliefs that are inconsistent with the induced affect. Some evidence for a rather general biasing property of affect was obtained by Johnson and Tversky (1983). In their research, the induction of negative affect produced a global

*It is important to note that our analysis applies to affect that is not associated with either very high (e.g. manic excitement) or very low (e.g. severe depression) levels of arousal. These extreme conditions are expected to disrupt information processing activity and performance in general (Easterbrook, 1959; Yerkes and Dodson, 1908).

†This does not mean that people carry this affect with them at all times. Rather it means that attitude change may require reconsideration of the affective properties of the stimulus (e.g. Do I still love you?; Cacioppo and Petty, 1982a).

decrease in the estimated frequency of negative events (e.g., fatalities due to heart disease), and positive affect produced a global decrease in estimates of these events. In short, the induced affect colored judgments.

Although no published persuasion research has been guided explicitly by this biased processing view, some research is consistent with it. For example, consider the abundant literature on the effects of fear arousing communications. The typical fear communication employed in social psychological research presents the noxious (fear arousing) consequences resulting from specific behaviors (e.g. smoking, failure to wear seatbelts, etc.; see Beck and Frankel, 1981). Interestingly, recent reviews of this literature have concluded that the arousal of fear has no direct effect on attitude change, "but only an indirect effect via the cognitive appraisal of the severity of the threat" (Rogers, 1983, p. 165; see also Leventhal, 1970). In short, the fear experienced by a message recipient may colour processing of the information provided. People in a fearful state may view the harmful consequences presented in the message as more serious than people who are less fearful and/or more likely to occur (see also Petty and Wegener, 1991; Schwarz *et al.*, 1985).^{*} Similarly, people in a sad mood may be more susceptible to appeals relying on pity, and angry people to messages advocating punitiveness, because the thoughts triggered by the affect are consistent with the direction of the arguments in the message. On the other hand, a happy person who was processing a sad or a punitive message would have inconsistent thoughts, and the message might therefore be less effective (cf. Roseman *et al.*, 1985; Weiss and Fine, 1956).

Affect under conditions of moderate elaboration likelihood

When the elaboration likelihood is moderate, affect is postulated to have an effect on the extent of information processing activity. Recent studies by Worth and Mackie (1987), Mackie and Worth (1989), and Bless *et al.* (1990) have shown that people in a positive mood process a message less carefully than people in a neutral mood. That is, positive mood was associated with more persuasion mostly for a message containing weak arguments, because the flaws in the arguments were less likely to be processed when in a positive mood. On the other hand, a message with strong arguments was less effective when people were in a positive mood because the strengths of the arguments were not processed. In addition to finding that argument quality was a less important factor for people in a positive mood, Worth and Mackie (1987) found that subjects who experienced positive affect (winning \$1) prior to a communication, reported attitudes that were based somewhat *more* on a simple expertise cue than subjects who were in a neutral mood.

^{*}Fear should serve in this role most strongly when the elaboration likelihood is high and the fear is not so "arousing" as to disrupt information processing.

This finding is consistent with other research showing that positive affect is sometimes associated with attempts to reduce the load on working memory and the complexity of decisions, resulting in quicker judgments than when affect is neutral (e.g. Forgas and Bower, 1987; Isen and Means, 1983). One explanation for the disrupting effect of positive mood relies on the notion that positive mood increases the accessibility of positive material in memory, leaving less attention or capacity to process the message carefully. An alternative view holds that positive mood may make people less motivated to process a message, especially if processing it is likely to be difficult or unpleasant because such processing would be likely to attenuate the positive mood. Mackie and Worth (1989) reasoned that if the cognitive explanation was correct, giving subjects in a positive mood more time to process the message should remove the disrupting effect of mood. Bless *et al.* (1990) reasoned that if the motivational explanation was correct, increasing the importance of the task (without giving additional time) should remove the disrupting effect of mood. Because both the cognitive and motivational explanations received support when tested, it is possible that both explanations have some validity (see Mackie, this volume, for additional discussion). The motivational view also holds open the possibility that positive mood could increase information processing activity over a neutral mood if subjects expected the message to be especially pleasant, uplifting, agreeable, and/or interesting (cf. Murray *et al.*, 1990).

Affect under conditions of low elaboration likelihood

If people have relatively low motivation and ability to process a persuasive communication, then affect, to the extent that it has any effect at all, should serve as a simple peripheral cue. As a cue, affect would induce change that was consistent with its direction—the presence of positive affect should lead to more favorable attitudes than if positive affect was not present, but the presence of negative affect should lead to more unfavorable attitudes than if negative affect was not present.

In addition to the studies on classical conditioning of attitudes noted earlier, a number of other investigations are also consistent with the view that affect can serve as a relatively simple cue in a persuasion context when the elaboration likelihood is low. For example, Gorn (1982) manipulated the relevance of an advertisement for a pen by telling some subjects that they were serving as consultants to an advertising agency and that they would later get to choose a pack of pens as a gift (high likelihood of thinking about the pen), whereas other subjects were given little reason to process the target pen ad (low elaboration likelihood). All subjects were exposed to two different ads for a pen. One ad provided information relevant to evaluating the product, whereas the other ad featured pleasant music rather than

information. About one hour after ad exposure, subjects were given a choice between the two brands of advertised pens. In the low elaboration likelihood condition, subjects favored the pen advertised with the pleasant music; however, under high elaboration conditions they favored the pen advertised with the informational campaign (see also Srull, 1983).

Summary

So far we have: (a) defined and distinguished the construct of "affect"; (b) presented a general conceptualization of the processes by which persuasive communications induce attitude change; and (c) highlighted the multiple roles for affect in this framework. In particular, it was argued that affect has much in common with other variables known to modify attitudes and is therefore capable of influencing attitudes in rather complex ways. In brief, when people are highly motivated and able to process issue-relevant arguments, affect will either serve as an argument, if it is relevant to a determination of the central merits of the issue, or it will bias the ongoing information processing activity. When people lack the requisite motivation and/or ability to process issue-relevant arguments, affect may serve as a simple peripheral cue. Finally, when people are uncertain as to whether the message warrants or needs scrutiny, affect will be especially important as a moderator of the route to persuasion (i.e. it will influence the extent of thinking about the object or issue under consideration).

Research on Multiple Roles for Affect in Persuasion

Several studies providing initial support for the ELM were described above. This research (reviewed in detail by Petty and Cacioppo, 1986a) has provided strong support for the idea that there is a tradeoff between argument processing and the operation of simple cues (see also reviews by Chaiken and Stangor, 1987; Cooper and Croyle, 1984; Sherman, 1987). That is, as the elaboration likelihood is increased, attitude change becomes more determined by the nature of the issue-relevant thoughts generated in response to the message arguments, but as the elaboration likelihood is decreased, attitude change becomes more determined by reactions to simple cues in the persuasion context. On the other hand, relatively little evidence exists to support the idea that any one variable can serve in multiple roles in different situations. Most of the available evidence comes from examinations across independent studies in which one variable appears to act in different roles in different experiments. Compelling evidence for the multiple roles postulate requires research in which one variable is shown to serve in multiple roles in a single study.

To provide some preliminary evidence about the plausibility of the hypothesis that affect can serve in multiple roles in persuasion situations,

two studies were conducted (Petty *et al.*, 1991). In each study, the effects of positive affect that was irrelevant to the message topic were examined under conditions of high and low elaboration likelihood. The two studies were conceptually identical but employed different means of varying elaboration likelihood and affect. In addition, each study used very different types of persuasive messages.

Situational determinants of the use of affect

As explained earlier in this chapter, the ELM holds that irrelevant pleasant affect should serve as a positive peripheral cue when the elaboration likelihood is low. On the other hand, when the elaboration likelihood is high, irrelevant pleasant affect should bias the ongoing information processing activity, making positive thoughts and ideas more accessible.

In order to examine this hypothesis, college undergraduates were exposed to a persuasive message 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). The persuasive message was a commercial for a new pen that featured four strong or weak attributes of the product. The commercial lasted about 30 seconds and was surrounded by two other commercials for other products. In order to create the high and low elaboration conditions, high elaboration subjects were told that they would be allowed to select a free gift at the end of the experiment from a variety of brands of pens, whereas low elaboration subjects were told that they would be allowed to select their gift from a variety of brands of coffee (one of the ads presented during the program was for coffee). To amplify this manipulation, subjects in the high elaboration conditions were further told that the pen that they would see advertised would soon be test marketed in their city. Subjects in the low elaboration conditions were told that the pen to be advertised would be test marketed in a distant location. This manipulation had proven effective in varying the extent of thinking in previous research (Petty *et al.*, 1983; Schumann *et al.*, 1990).

In sum, the design of the study was a 2 (elaboration likelihood: low or high) \times 2 (affect: positive or neutral) \times 2 (argument quality: strong or weak) between subjects factorial. Following exposure to the program and commercial, subjects reported on their mood states (e.g. happy-sad) and expressed their attitudes (e.g. favorable-unfavorable) and thoughts about several of the products featured. The thoughts were subsequently coded into the categories of positive, negative, and neutral (see Cacioppo and Petty, 1981, for a complete discussion of thought coding procedures). To control for individual differences in total thought production, the proportion of positive thoughts served as the primary dependent measure of biased thinking.

Manipulation checks revealed that subjects in the positive mood condition reported feeling more happy than those in the neutral mood condition. The

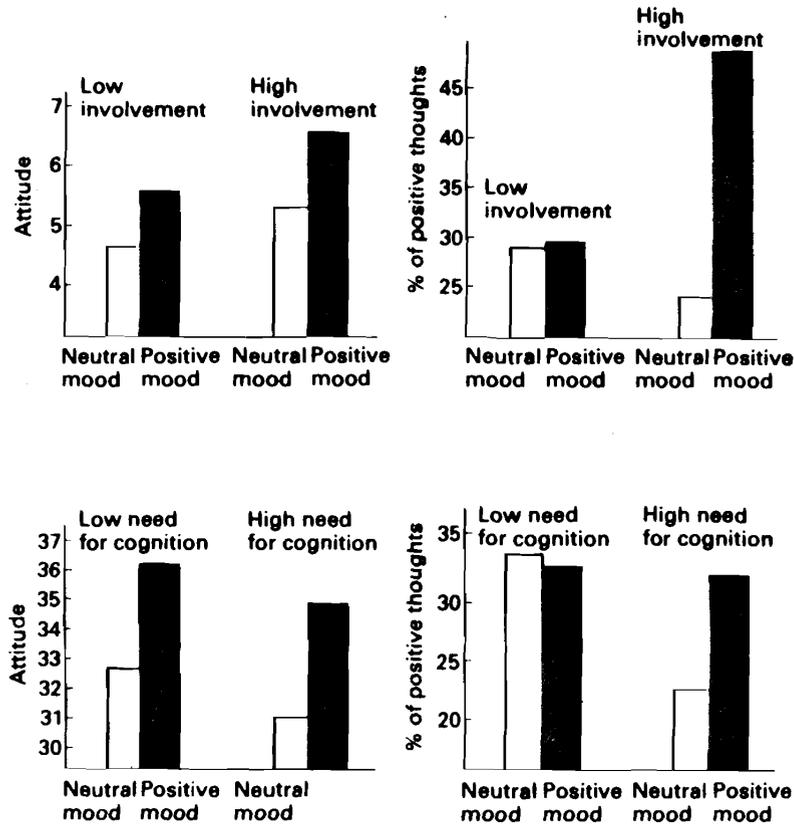


FIG 10.1 Top left panel: Effects of involvement and positive affect on attitudes toward a consumer product. Top right panel: Effects of involvement and positive affect on % of positive thoughts in response to a television commercial. Bottom left panel: Effects of need for cognition and positive affect on attitudes toward a social issue. Bottom right panel: Effects of need for cognition and positive affect on % of positive thoughts in response to a message on a social issue. Data are from Petty et al. (1991).

attitude and thought measures are presented in Figure 10.1. In the top left panel, it can be seen that positive affect led to more positive attitudes about the pen under both high and low elaboration conditions.* In the top right panel, it can be seen that affect interacted with elaboration condition in influencing thoughts. That is, the positive affect manipulation had no impact on thoughts under low elaboration conditions, but when subjects were motivated to think, positive affect increased the proportion of positive thoughts generated.

*In addition, a main effect for elaboration was observed. Subjects in the high elaboration condition reported more favorable attitudes than those in the low elaboration condition. Importantly, no interaction between elaboration condition and affect emerged.

To further explore the different processes induced by affect under high and low elaboration conditions, causal path analyses were conducted using LISREL VI (Joreskog and Sorbon, 1984) to simultaneously estimate the three paths between (a) self-reported mood and attitude toward the pen, (b) self-reported mood and proportion of positive thoughts generated, and (c) proportion of positive thoughts generated and attitude toward the pen. Separate analyses were conducted for high and low elaboration subjects. The top portion of Figure 10.2 presents the path coefficients resulting from these analyses. 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). In sum, both the experimental results (Figure 10.1) and the correlational results (Figure 10.2) are consistent with the view that although positive affect rendered attitudes more favorable under both high and low elaboration conditions, it did so by different processes. The fact that similar changes were induced by different processes is important because of the different consequences of these processes. That is, the more favorable attitudes induced by positive affect under high elaboration conditions should be more persistent, resistant, and

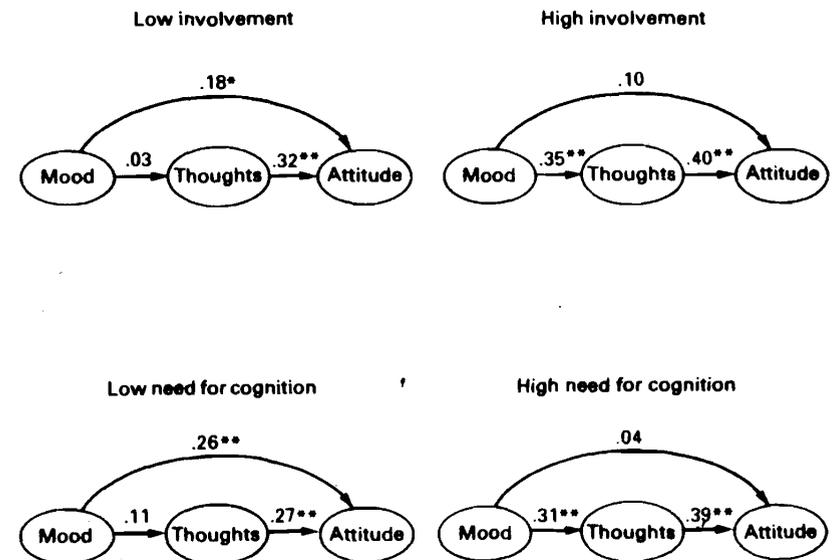


FIG 10.2 Top left panel: Causal model of reported mood, % of positive thoughts, and attitudes under low involvement conditions. Top right panel: Causal model under high involvement conditions. Bottom left panel: Causal model for individuals low in need for cognition. Bottom right panel: Causal model for individuals high in need for cognition. Note. * indicates $p < .05$; ** indicates $p < .01$. Data are from Petty et al. (1991).

predictive of behavior than the comparable changes induced by affect under low elaboration conditions.

Individual differences in the use of affect

In the previous study, a situational determinant of the role of affect in persuasion was examined. In a second study, an individual difference variable was investigated. Previous work on the ELM has shown that individuals differ in their tendencies to follow one route to persuasion or the other. People who enjoy thinking (those high in "need for cognition"; see Cacioppo and Petty, 1982b) tend to focus on the perceived quality of the arguments when they process a persuasive message, but people who do not enjoy thinking (those low in need for cognition) tend to rely on simple cues in the persuasion context (Haughtvedt *et al.*, 1988). A reasonable hypothesis, then, is that affect will serve in different roles for people who characteristically do and do not like to think. For individuals with low need for cognition, pleasant affect should serve as a positive peripheral cue, but for individuals with high need for cognition, pleasant affect should bias the ongoing information processing activity.

In a study examining this hypothesis (Petty *et al.*, 1991), individuals who scored above and below the median on the need-for-cognition scale were exposed to either a strong or a weak message arguing in favor of a new foster care system. Prior to message exposure, subjects engaged in a series of activities that placed them in either a relatively positive or a neutral mood. Specifically, upon entering the lab, subjects were told that they would participate in pretesting several tasks that might be used in future experiments. All subjects first engaged in completing some math problems, a word search puzzle, and an alphabetizing task. For the fourth task, subjects in the positive mood condition completed a "Life Event Survey" in which they were asked to recall a recent positive event in their lives which made them feel particularly good. They were asked to vividly recall the event and prepare a written description of it. This manipulation was adapted from Bless *et al.* (1990). Subjects in the neutral mood condition listened to neutral music during this time period.

In sum, the study was a 2 (need for cognition: low or high) \times 2 (argument quality: strong or weak) \times 2 (affect: positive or neutral) between subjects factorial. Following the mood induction and exposure to the message, subjects reported on their moods, expressed their attitudes toward the foster care program, and listed their thoughts about it. As in the previous study, the thoughts were subsequently coded into the categories of positive, negative, and neutral. Again, the proportion of positive thoughts served as the primary measure of biased thinking.

As expected, subjects in the positive mood condition indicated that they

felt more "pleasant" during the message than subjects in the neutral mood condition. The attitude and thought measures are presented in Figure 10.1. In the bottom left panel, it can be seen that pleasant affect led to more positive attitudes about the foster care program for both high- and low-need-for-cognition individuals. In the bottom right panel, an interaction pattern between affect and thoughts can be observed. That is, positive affect had no impact on the thoughts of low-need-for-cognition individuals, but positive affect tended to increase the proportion of positive thoughts for people high in need for cognition.*

As in the first study, causal path analyses were conducted to explore the different effects of affect under high and low elaboration conditions. Separate analyses were conducted for high- and low-need-for-cognition individuals. The bottom portion of Figure 10.2 presents the path coefficients that resulted. For subjects low in need for cognition, mood had a direct effect on attitudes, but did not influence thoughts (see bottom left panel). On the other hand, for high-need-for-cognition individuals, mood influenced the production of positive thoughts, which in turn had an impact on attitudes (see bottom right panel). This study replicated the pattern observed in the previous experiment. Together, the studies provide strong support for the view that affect can serve in multiple roles in persuasion situations.

Future Research on the Role of Affect in Persuasion

Preliminary support is now available for the view that positive affect can serve in at least three roles in persuasion situations. In the research guided by the ELM and described above, positive affect was shown to serve as a simple cue when people were unmotivated to process the issue relevant arguments, but positive affect influenced the proportion of positive thoughts to the message when people were motivated to think about the communication. In research where no special attempt was made to enhance or reduce motivation or ability to process the message, positive mood was shown to disrupt information processing activity (see Mackie, this volume).

Even though the existing research provides a coherent though complex pattern of results, considerable additional work is needed before the multiple roles for affect in persuasion are understood. The conceptualization and evidence presented here have emphasized the "elaboration likelihood" of the persuasion context as an important determinant of the process

* Unlike the involvement study, however, the interaction between need for cognition and affect was not statistically significant. In addition, main effects for need for cognition and argument quality were present. Low-need-for-cognition subjects were more favorable toward the foster care program than high-need-for-cognition individuals and strong arguments produced more favorable attitudes than weak ones.

by which affect modifies attitudes.* Other variables also deserve attention as factors influencing the role of affect in persuasion. For example, it will probably be important to examine the extent to which the induced affect is congruent or incongruent with the affectivity of the arguments under consideration. For example, in our research, we found that positive affect increased positive thoughts and favorable attitudes when people were highly motivated to process unemotional arguments. If we had exposed recipients in a positive mood to emotional messages relying on clearly incongruent affect (e.g. arguments based on sympathy or pity) the enhanced positive thoughts elicited by the affect may have backfired! Under high elaboration conditions, affect may be most effective when it is consistent with (or at least not in conflict with) the type of arguments employed (e.g. fear would work better with danger arguments, but sadness would enhance sympathy appeals). Under low elaboration conditions, where affect is more likely to serve as a simple cue, the congruence of affect and arguments should be less important. Under moderate elaboration conditions, the nature of the message may interact with affect to determine how much processing takes place. For example, a person in a positive mood may be especially interested in processing a pleasant or agreeable message and avoiding unpleasant or disagreeable messages in order to maintain a positive mood. Alternatively, because of the spreading activation of mood-congruent material in memory, positive mood may allow a deeper processing of positive than negative communications (cf. Forgas and Bower, 1988).

In addition to the type of message presented, the nature of the attitude being challenged may also prove to be important. Edwards (1990) has argued that if the attitude under attack is based primarily on affect rather than cognitions, affective means of change should be especially powerful, but Millar and Millar (1990) have argued for the opposite conclusion. Whether it is better to "match" an affective persuasive appeal to affectively based attitudes or to provide a "mismatch" will probably depend on a number of factors. For example, if the persuasive attack is strong (i.e. it effectively undermines the basis of the attitude), then a match would seem better. If the attack is weak, then a mismatch might prove more persuasive, especially if the person has not experienced this type of challenge previously (cf., McGuire, 1964).

Finally, the basis of the affect itself may have important implications for information processing and persuasion. Some affect inductions require considerable cognitive activity (e.g. thinking of ways to spend a large sum of money) whereas others do not (e.g. listening to pleasant music). Will each be equally effective in biasing thoughts or serving as simple cues? Furthermore, how does each type of affect modify thoughts? Does it influence how

* Existing research has also focused on positive rather than negative affect. Negative affect may have more complicated effects on judgments (cf. Isen, 1984).

"good" consequences appear, how "likely" they seem, or both (see Petty and Wegener, 1991)? It seems clear that researchers exploring the multiple roles for affect in persuasion will not run out of research questions in the near future.

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Correspondence should be addressed to Richard E. Petty, Department of Psychology, Ohio State University, 1885 Neil Avenue Mall, Columbus, OH 43210, USA. This chapter was supported in part by NSF grant BNS 90-21647.

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