Why We Evaluate
Functions of Attitudes

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Attitude Functions and Persuasion: An Elaboration Likelihood Approach to Matched Versus Mismatched Messages

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The functional theorists believed that people hold attitudes because these attitudes serve particular needs that people have—such as to understand the world, fit in with others, express important values, have high self-esteem, and so forth (see Katz, 1960; Smith, Bruner, & White, 1956). For example, a person might develop a prejudice toward a minority group because this negative evaluation of the out-group makes the person feel better about the in-group and him- or herself. Research on attitude functions requires some method for assessing the functions served by attitudes, and contemporary theorists have identified a number of ways
in which attitude functions can be identified. One method relies on individual differences and suggests that most attitudes serve different functions for different people. For example, for some people, most attitudes might serve a value-expressive function but for others, most attitudes might serve a social-adjustive function (e.g., Clary, Snyder, Ridge, Miene, & Haugen, 1994; Snyder & DeBono, 1983, 1989). An alternative to the individual difference approach suggests that attitudes toward particular issues or objects might serve a common function for most people. For example, attitudes toward aspirin might be based primarily on utilitarian concerns (e.g., Abelson & Prentice, 1989, Prentice, 1987; Shavitt, 1990). It also seems possible that different situations could make different functions of an attitude salient for most objects and for most people. For example, when at a party, the social-adjustive functions of one’s attitudes might dominate, but when in church, value-expressive motivations might be prepotent. Finally, it is possible that in some cases there is little consistency in functions, and thus one must assess functions separately for each attitude object for each person in each situation (see Herek, 1987). Various combinations could also be possible. That is, for some people, a subset of their attitudes might be chronically based on social-adjustment concerns, whereas another set is based on value-expressive concerns and a third set is subject to situational variability.

FUNCTIONAL MATCHING EFFECTS IN PERSUASION

A key notion of the functional approach is that it is important to understand the functional basis of people’s attitudes in order to understand how to change those attitudes. Functional theory offers the general proposition that persuasive appeals that address or “match” the function served by an attitude will be more persuasive than appeals that are irrelevant to or “mismatch” the function served by that attitude. That is, one should offer value-relevant arguments to the person whose attitude serves a value-expressive function, for objects that have a value expressive basis, and for situations in which concerns about values dominate, but one should offer social-adjustment arguments when this function serves as the basis of the attitude to be changed (e.g., Clary et al., 1994; DeBono & Facher, 1991; DeBono & Rubini, 1995; Katz, 1960; Kiesler, Collins, & Miller, 1969; Lavine & Snyder, 1996; Shavitt, 1990; Snyder & DeBono, 1989).
Various studies have provided support for the fundamental functional hypothesis that persuasive appeals are more effective when they present information that matches the function underlying an attitude than when they present information that does not match. For example, Snyder and DeBono (1985) used the individual difference method of identifying people for whom attitudes likely served different functions. These authors reasoned that, because high self-monitors (Snyder, 1974, 1979) tailor their behavior to fit the socially appropriate considerations of different situations, their attitudes might typically serve the social-adjustive function. In contrast, Snyder and DeBono (1985) reasoned that, because low self-monitors are guided by internal sources such as values and feelings, their attitudes are more likely to serve the value-expressive function.

To examine the idea that attitudes can be changed more easily by presenting message arguments that matched different functions, Snyder and DeBono (1985) presented research participants with advertisements for a variety of products. These advertisements contained content that appealed either to the social-adjustment function (i.e., describing the social images that consumers could gain from use of the product) or to the value-expressive function (i.e., presenting content regarding the intrinsic quality or merit of the product). For example, an ad for Canadian Club whiskey that contained product image content showed a bottle of the whiskey resting on a set of blueprints for a house and stated that “You’re not just moving in, you’re moving up.” The product quality ad for the whiskey had the same picture, but used the statement, “When it comes to taste, everyone draws the same conclusion.”

Across a number of studies and using a variety of measures, Snyder and DeBono (1985) found that high self-monitors rated ads with image content as better (more effective) than ads with quality content. In contrast, low self-monitors rated quality ads as better (more effective) than image ads. Individuals high versus low in self-monitoring have also been shown to rate product quality as better when the product is advertised in a manner consistent with the functional base assumed to underlie the attitude (DeBono & Packer, 1991; see Clary et al., 1994; and Lavine & Snyder, 1996 for additional evidence consistent with matching functional message content to individuals’ bases of attitudes being more persuasive than mismatching content).

Using an object-oriented approach to classifying functions, Shavitt (1990) also found support for the hypothesis that advertisements that
contain function-relevant arguments are more persuasive than function-
irrelevant ads. That is, people preferred advertisements when the ad
content matched the function served by the product, held more favorable
attitudes toward brands advertised with the matching strategy, and pre-
ferred to purchase brands advertised with an ad when the content matched
rather than mismatched the function of the object. Thus, the existing
literature is consistent with the functional hypothesis that, all else being
equal, messages containing arguments that match functional bases are
more persuasive than those that mismatch functional bases (see Shavitt,
1989; Snyder & DeBono, 1989, for reviews).

The Mediation of Functional Matching Effects

Although the effect of matching message content to the functional basis
of a person’s attitude has been clear and consistent in past research, the
reason why such functional matching effects have been obtained has been
less clear. As Lavine and Snyder (1996) recently noted, “the logic of the
functional approach’s matching hypothesis does not fully address the
question of how such motivational appeals influence attitudes... in fact,
the cognitive processes that mediate the functional matching effect are
not yet well understood” (p. 581). Based on past work suggesting that
existing cognitive structures can bias the evaluation of message arguments
(e.g., Cacioppo, Petty, & Sidera, 1982), Lavine and Snyder (1996) hy-
pothesized that “functional match of a persuasive message should directly
influence the recipient’s perception of message validity... which in turn
should influence postmessage attitudes” (p. 583). That is, these investiga-
tors suggested that functional matching of arguments should “bias recipi-
ents’ evaluations of the persuasiveness of the arguments” and result in the
message being “perceived as more persuasive than messages that contain
functionally-irrelevant information” (p. 583). In two studies in which
high and low self-monitors were presented with messages that either
matched or mismatched the presumed functional basis of the attitude,
mismatched messages elicited more favorable thoughts and were rated as
more persuasive. That is, low self-monitors seemed motivated to generate
favorable thoughts to a message that made an appeal to values, whereas
high self-monitors seemed motivated to generate favorable thoughts to a
message that made an appeal to image. Of greater interest, valenced
thoughts and perceptions of message quality mediated the impact of
functional argument matching on postmessage attitudes. Thus, this study
provided the first mediational evidence consistent with the view that arguments that match the functional basis of one’s attitude produce greater attitude change because of biased processing of those arguments.

In this chapter, we provide a reexamination of the mechanisms by which functional matching effects occur and address the extent to which these mechanisms might account for other types of matching effects in persuasion. Instead of suggesting that matching always leads to enhanced persuasion, we argue that a more complex process might be responsible for the effects found to date. Before turning to this, however, we provide a very brief overview of our conceptual framework—the Elaboration Likelihood Model (ELM) of Persuasion.

The Elaboration Likelihood Model of Persuasion

In brief, the ELM (Petty & Cacioppo, 1981; 1986; Petty & Wegener, 1999) was formulated as a theory about how various source, message, recipient, and contextual variables have an impact on attitudes toward various objects, issues, and people. The theory outlines a finite number of ways in which variables can have their impact on judgments, and it specifies when variables take on these roles as well as the consequences that result from these different roles. That is, the ELM is a theory about the processes that underlie changes in judgments of objects, the variables that induce these processes, and the strength of the judgments that result from these processes. The ELM is a dual-route but multiprocess theory. The dual routes—central and peripheral—refer to attitude changes that are based on different degrees of information processing activity. Central route attitude changes refer to those that are based on relatively extensive and effortful information processing activity aimed at scrutinizing and uncovering the central merits of the issue or advocacy. Peripheral route attitude changes are based on a variety of lower effort attitude change processes.

Perhaps the most critical construct in the ELM is the elaboration continuum. Points along the elaboration continuum are determined by how motivated and able people are to assess the central merits of a person, issue, or a position (i.e., the attitude object). The more motivated and able people are to assess the central merits of the attitude object (i.e., determine how good it really is), the more likely they are to effortfully scrutinize all available object-relevant information. This is because effortful scrutiny is usually perceived to be the best way to achieve this goal. Thus, at the high end of the elaboration continuum, people assess object-relevant
information in relation to knowledge that they already possess, and arrive at a reasoned (though not necessarily unbiased) attitude that is well articulated and bolstered by supporting information (the central route to judgment). At the low end of the elaboration continuum, information scrutiny is reduced. Nevertheless, attitude change can still result from a low-effort scrutiny of the information available (e.g., examining less information than when elaboration is high or examining the same information less carefully) or from a number of less resource demanding processes such as classical conditioning (Staats & Staats, 1958), self-perception (Bem, 1972), or the use of heuristics (Chaiken, 1987). Attitudes that are changed with minimal object-relevant thought are postulated to be weaker (i.e., less persistent, resistant, and predictive of behavior) than attitudes that are changed to the same extent as a result of maximal object-relevant thought (see Petty, Haugtvedt, & Smith, 1995).

At different points along the elaboration continuum, variables are postulated to take on different roles. In general, when the likelihood of elaboration is low, variables influence attitudes (if at all) through some process requiring relatively little effort such as by invoking a decision heuristic ("if I feel good, I must like it"). Under high elaboration, however, the same variable can influence attitudes through some central mechanism such as by biasing the ongoing cognitive activity (e.g., positive moods could bring positive thoughts to mind; see Petty, Schumann, Richman, & Strathman, 1993). If the elaboration likelihood is not constrained to be high or low by other factors, then a variable itself can determine the extent of issue-relevant thinking (e.g., positive mood could enhance or reduce processing of the message relative to a negative mood; see Wegener, Petty, & Smith, 1995).

The ELM and Functional Matching Effects

According to the ELM, just like other variables, matching of message arguments to the functional bases of peoples' attitudes should have an impact on attitude change by different processes along the elaboration continuum. For example, when the overall likelihood of message elaboration is high, such as when distractions are low (Petty, Wells, & Brock, 1976), and the message is high in personal relevance (Petty & Cacioppo, 1979), functional matching should work by biasing message processing (see Chaiken & Maheswaran, 1994; Petty et al., 1993). In fact, Levine and Snyder (1996) noted that in their research, in which functional matching
appeared to invoke a positive bias in message processing, it was likely that “processing motivation was relatively high” (p. 600).

On the other hand, according to the ELM, if the overall likelihood of thinking is quite low, functional matching might produce attitude change by the lower effort peripheral route. For example, if the arguments simply seemed to suggest that values were relevant to the advocacy, a low self-monitor might be more inclined to agree than a high self-monitor by reasoning that “if it speaks to my values, it must be good.” An analogous heuristic might be used by a high-self monitor to accept a message with arguments using terms such as “image” since the person might reason that “if the product is image related, I should buy it” (cf. Chaiken, 1987). These simple inferences could lead to message acceptance in the absence of thinking about the actual justifications for the value or image assertions contained in the message. DeBono (1987), in fact, argued that such a peripheral process was responsible for the functional matching effect he observed in one study. In this research, DeBono informed recipients which side of an issue (pro or con) was associated with the function served by their attitude, but no message was actually presented. Following exposure to this information, people expressed more agreement with the side that was said to be a functional match. Although it is possible that people generated arguments that were supportive of the position said to be consistent with the functional basis of their attitudes (i.e., biased central route processing), it seems quite reasonable that in the absence of any arguments, attitude change was the result of a low effort peripheral process.

Both the cue and biased processing explanations for functional matching effects predict statistical main effects of functional matching. The mechanisms behind the cue and biased processing explanations are quite different, of course, but the attitudinal outcome is similar. That is, messages that match the underlying basis of the attitude should be more effective than messages that mismatch—either because matching serves as a peripheral cue or because people engage in biased evaluation of functionally matched arguments (or a biased generation of arguments). It is also possible, however, that the past main effects of functional matching could be accounted for by another process highlighted by the ELM—differential processing of matched versus mismatched messages. As previously noted, if the background elaboration likelihood is not constrained to be either very high or low, a persuasion variable such as functional argument match might prompt people to effortfully scrutinize the message. In particular, people might give more careful thought to a message
when the content of that message matches the functional basis of their attitudes than when the content mismatches. If past messages in the literature used relatively cogent information to support the attitude object, and content matching enhanced message processing, then people for whom the message matched the functional basis would be more persuaded than people for whom the message mismatched because they would better recognize the cogency of the arguments presented. According to this analysis, however, if the supporting evidence were spurious, then matching would be less effective than mismatching because people for whom the message matched would better recognize the weakness of the arguments (Petty & Cacioppo, 1979). Thus, the enhanced scrutiny hypothesis suggests that functional matches of arguments could be either superior to or inferior to mismatches in producing persuasion, depending on the quality of the information presented in support of the advocated position.

A few studies are relevant to the hypothesis that functionally matched arguments are sometimes scrutinized more carefully than mismatched arguments. First, some indirect evidence for this hypothesis comes from studies that examined functional matching without varying the actual content of the arguments that comprised the message, instead varying whether the source of the message was one that appealed to individuals whose attitudes served different functional bases. DeBono and colleagues (DeBono & Harnish, 1988; DeBono & Telesca, 1990) have provided strong support for the notion that functionally relevant sources can increase message scrutiny over functionally irrelevant sources even though the messages are not varied to differ in the actual functions they address. The notion is that expert sources provide a better functional match for individuals' whose attitudes are based on values and the central merits of things (i.e., low self-monitors), but that socially attractive sources provide a better functional match for individuals whose attitudes are based on social-adjustment concerns (i.e., high self-monitors). This may be because of differential identification with these sources or because these sources might be expected to present different kinds of information (i.e., an expert might be more likely to present value-relevant arguments than an attractive source, and an attractive source might be more likely to present image arguments than an expert source). Consistent with the notion that functional source matching increases message scrutiny, DeBono and Harnish (1988) found that attitudes were more dependent on argument quality when the source matched the presumed functional basis.
of the attitude than when it mismatched. The enhanced impact of argument quality on attitudes is indicative of enhanced information processing activity (Petty & Cacioppo, 1986; Wegener, Downing, Krosnick, & Petty, 1995).

Of course, in the studies that varied some feature of the communication other than the message arguments, the messages themselves never directly matched or mismatched the functional bases of peoples' attitudes. Because of this, these studies provide no information as to whether message content that matches functional bases (which is the focus of most of the work on functional matches) receives greater thought.

Functional Argument Matching Can Increase Message Scrutiny

To summarize, the previous literature on functional argument matching indicates that matched arguments are more persuasive than nonmatched arguments, but it is not entirely clear why this effect is obtained. The one mediational study that has been conducted suggests that the mechanism behind the argument matching effect is biased information processing (Lavine & Snyder, 1996). However, the ELM suggests that functional argument matching effects could result from other mechanisms such as the operation of peripheral cues or enhanced scrutiny of matched messages.

In two experiments, Petty and Wegener (1998) attempted to test the hypothesis that message arguments that match the functional basis of an attitude receive greater scrutiny than those that mismatch the functional basis. This possibility is especially intriguing because if true, it implies that functional argument matching sometimes leads to less persuasion than does functional mis-matching. This should occur if the arguments are weak because if functional matching increases message scrutiny, people should better realize how specious the arguments are and thus should be more likely to reject them. If this result were obtained, it would provide a strong counterpoint to the notion that functional matching of arguments invariably increases persuasion due to favorably biased information processing.

To examine the enhanced scrutiny idea, Petty and Wegener (1998) manipulated the strength of the matching versus mismatching information in brief messages about new consumer products. If information that matches functional bases receives greater scrutiny than information that
mismatches functional bases, one would expect to obtain an interaction between function match and the strength of the arguments in the message. Participants who read matching information should form more favorable opinions of the products when the latter are supported by strong, cogent information rather than by weak, specious information to a greater extent than participants who read mismatching information. If the biased processing or cue alternatives are operating in this context, however, one would expect a main effect of functional match (with matching information leading to more favorable opinions than mismatching information) instead of or in addition to the interaction between argument strength and functional match (see Petty & Cacioppo, 1986).

To summarize, rather than suggesting that arguments that match the function served by one’s attitude invariably are more persuasive than arguments that mismatch, the processing view suggests that, in some circumstances at least, matching arguments are scrutinized more carefully. If information in matched messages is processed more thoroughly than information in mismatched messages, then matches should be more persuasive than mismatches if strong arguments are used (and baseline opinions are not already so favorable that little room is left for enhancement of opinions), but matches should also be less persuasive than mismatches if weak arguments are used.¹

Students who were high or low in self-monitoring (Snyder, 1974) received messages that provided descriptions of four products (i.e., a shampoo, a shoe, a coat, and a toothpaste). Each product was introduced and described with either strong or weak claims about product quality, or with strong or weak appeals to image associated with use of the product. On the same page as the information about each product, participants provided their opinions of the product. Messages that matched the hypothesized functional bases of attitudes (i.e., image arguments to high self-monitors and quality arguments to low self-monitors) were classified as matches, and messages that mismatched the hypothe-

¹As noted already, the ELM suggests that each of the explanations (i.e., cue effect, biased elaboration, enhanced elaboration) could account for functional matching effects under different baseline levels of thinking (see Petty & Cacioppo, 1986). We focus here on the enhanced elaboration hypothesis because it is the one that can accommodate the previously unobtained result that the matching of arguments to functions can actually reduce persuasion. In addition, since prior work on functional matching of arguments has never manipulated the elaboration likelihood to render it especially high or low, the elaboration conditions that characterize most past research might best be described as moderate. In any case, the current research examines the impact of functional matches when the elaboration likelihood is not constrained to be very high or low.
sized functional bases of attitudes (i.e., quality arguments to high selfmonitors and image arguments to low self-monitors) were classified as mismatches. Thus, the test of the processing hypothesis could be represented as the two-way interaction between argument strength and functional match. The four variations of type and strength of appeal for the shampoo ads were as follows:

Strong Image: A brand new shampoo is being introduced whose primary qualities are related to how good it makes your hair look. That is, of people who have used the shampoo in tests of the product, over half of them thought the shampoo made their hair look better than the shampoo they used at home. Also, the shampoo seemed able to make people's hair manageable and attractive for a longer period of time than other shampoos.

Weak Image: A brand new shampoo is being introduced whose primary qualities are related to how good it makes your hair look. That is, of people who have used the shampoo in tests of the product, almost half of them thought the shampoo made their hair look better than the shampoo they used at home. Also, the shampoo seemed able to make people's hair manageable and attractive for some time as long as people did not go outdoors or otherwise mess up their hair following initial styling.

Strong Quality: A brand new shampoo is being introduced whose primary qualities are related to how well it cleans your hair. That is, of people who have used the shampoo in tests of the product, over half of them thought the shampoo cleaned their hair better than the shampoo they used at home. Also, the shampoo seemed able to keep hair clean for a longer period of time than other shampoos.

Weak Quality: A brand new shampoo is being introduced whose primary qualities are related to how well it cleans your hair. That is, of people who have used the shampoo in tests of the product, almost half of them thought the shampoo cleaned their hair better than the shampoo they used at home. Also, the shampoo seemed able to keep hair clean for some time as long as people did not go outdoors or otherwise soil their hair.

Following exposure to the appropriate message, participants were given a variety of semantic differential scales on which to rate their evaluations of the products. Products were always presented in the same order (i.e., shampoo, coat, shoe, and toothpaste), and all four combinations of argument strength and type of appeal were represented across the four products. Participants received one of four orders of the message conditions that corresponded to a revised Latin square for the four combinations of argument strength and type of appeal.

2 Alternatively, we could have looked for the (identical) three-way interaction of Self-monitoring (low, high) X Argument quality (weak, strong) X Message type (image, quality).
Corresponding to the experimental design previously described, the attitude measure was submitted to a 2 (Self-monitoring: low, high) X 2 (Argument quality: weak, strong) X 2 (Message type: matched, mismatched) mixed-design ANOVA. As in much prior research, strong arguments led to more favorable opinions toward the products than did weak arguments. Consistent with the hypothesis that information matching the functional base of an attitude is naturally processed more extensively than information mismatching the functional base, the argument strength main effect was qualified by the two-way interaction between argument strength and functional match (see Fig. 5.1). That is, the effect of argument strength was greater when the message content matched the functional base of product attitudes (i.e., when image messages were presented to high self-monitors or quality messages were presented to low self-monitors) than when the message content mismatched the functional base of product attitudes (i.e., when quality messages were presented to high self-monitors or image messages were presented to low self-monitors). The Functional match X Argument strength interaction did not differ across levels of self-monitoring. Because

![Diagram](image)

**FIG. 5.1.** Effects of functional matching and argument quality on attitudes (data from Petty & Wegener, 1998).
the weak arguments were especially ineffective in persuading people when the message matched the function underlying the attitude, there was also a main effect of functional match such that matches were significantly less effective than mismatches.

**Why Does Functional Matching Work?**

In the domain of attitude functions, the accumulated research suggests that matching of a message to the function served by one's attitude can influence attitudes in multiple ways at different points along the elaboration continuum. Specifically, when the elaboration likelihood was not constrained to be high or low, functional matching served to enhance information processing activity (Petty & Wegener, 1998). When the elaboration likelihood was low, functional matching appeared to serve as a favorable peripheral cue (DeBono, 1987), and when the elaboration likelihood was high, functional matching appeared to impart a favorable bias to the ongoing information processing activity (Lavine & Snyder, 1996).

Why does functional matching have these effects? In one study, DeBono and Packer (1991) found that people rated matching messages to be more self-relevant than mismatching messages. If matched messages are perceived to be more self-relevant, perhaps because they are perceived to speak more directly to the kind of person the recipient is, a number of consequences follow. First, considerable prior research suggests that any feature of a message that invokes self-relevance (whether based on connections to one's personal goals, values, possessions, etc.) increases information-processing activity when other variables have not already constrained the elaboration likelihood to be high or low (Petty & Cacioppo, 1979; see Petty, Cacioppo & Haugtvedt, 1992; Thomsen, Borgida, & Lavine, 1995, for reviews).

When the likelihood of thinking is low, however, tying of the message to the self should have other consequences. First, consider that people tend to like things that are associated with themselves more than things that are associated with others. Thus, research on dissonance theory showed that an object tends to be seen as more valuable as soon as an individual chooses it (e.g., Brehm, 1956). In fact, objects are also seen as more valuable even if people are simply given the items and no choice is involved (Kahneman, Knetsch, & Thaler, 1991). People overvalue members of their in-group (Tajfel, 1981), prefer the arguments they have generated over the arguments generated by others (Greenwald & Albert,
1968), and have even shown preferences for the letters in their own names over other letters (Nuttin, 1985). This strong preference for things associated with the self suggests that people would value a message framed as linking to the self such as a message that is seen to speak to "the kind of person I am." When the likelihood of thinking is low, this "own-ness" (Perloff & Brock, 1980) or self-bias presumably operates to increase agreement with a message. When the likelihood of thinking is high, this bias presumably motivates people to see the merits of the position associated with the self. Such self-serving biases in cognitive processing are well documented in the literature (see Baumeister, 1998).

OTHER MATCHING EFFECTS IN PERSUASION

Given that functional matching effects can operate in multiple ways by making a connection to the self salient, it seems plausible that making other links between a message and the self salient might operate similarly. In the remainder of this chapter, we examine the potential similarities in operation between functional matching effects and matching effects that involve self-schemas, personal identities, and matching messages to bases of attitudes other than functional ones.

Self-Schema Matching

The Self-Schema and Persuasion. Markus (1977) defined self-schemas as "cognitive generalizations about the self...that organize and guide the processing of self-related information contained in the individual's social experiences" (p. 64). In other words, a self-schema is represented as a construct that contains information about who we are that can influence the processing of information. To find evidence of the construct, Markus identified people who were schematic on the trait of "independence," "dependence," or neither based on their answers to a questionnaire. Markus found that compared to those who were not schematic on a trait, schematics were quicker to report if a schema-relevant trait adjective was self-descriptive, were able to recall more schema-consistent prior behavior, and felt that future schema-consistent behavior was more likely.

As noted previously, functional matching effects might work because when a message is matched to the psychological function served by an
attitude, the message seems more self-relevant or seems to contain information about “who I am” (e.g., “I care about image and the message is about image”; or “I think image is important for this object and the message is about image”). Unlike the work on functional matching, however, there is a paucity of research on self-schema matching and persuasion. One early study by Cacioppo et al. (1982) suggested that matching a message to a recipient’s self-schema could enhance persuasiveness—much as the early work on functional matching suggested that such matching was invariably good for persuasion.

As noted earlier, Cacioppo et al. (1982) hypothesized that self-schema matching would bias processing of a persuasive message. Using the Markus (1977) procedure, they identified participants who were schematic on the concept of “religious,” “legalistic,” or neither, and then exposed them to a proattitudinal persuasive message that was framed in either religious or legalistic terms. That is, whereas some participants received legalistic arguments such as, “The right to life is one that is constitutionally safeguarded,” others received religious arguments such as, “There is a sacramental quality to the nature of life that demands that we show the utmost reverence for it.” Finally, participants were asked to report how persuasive they felt each of the messages was. Participants rated the messages framed in a schema-consistent manner as more persuasive than the messages framed in a schema-inconsistent manner. That is, participants who were schematic on the legalistic trait felt that the legalistically framed messages were more persuasive than were the religiously framed messages, whereas those who were schematic on the religious trait felt that the religiously framed messages were more persuasive. On the surface, at least, this result is similar to the early functional matching results. In addition, similar to the early functional matching studies, the mechanism behind the effect is not entirely clear. Cacioppo et al. (1982) suggested that people engaged in favorably biased processing of the schema-congruent message. Although this is a reasonable possibility, the data do not permit strong inferences concerning biased processing since argument quality was not varied, and no thought generation task was used to assess cognitive activity. Thus, it could be that the legalistic or religious wording of the arguments served as a peripheral cue and were accepted with relatively little scrutiny when they matched participants’ self-schemata; or it is possible that matching the message to self-schemas enhanced the overall amount of scrutiny that the message received, or it could be that biased processing took place, but that the favorable bias
required a proattitudinal message. With a counterattitudinal appeal, a schema-congruent message might be counterargued.

**Self-Schema Matching Can Increase Message Scrutiny.** To examine the possibility that matching a message to a recipient's self-schema could enhance information processing activity, Bizer, Wheeler, and Petty (1998) manipulated the strength of the matching versus mismatching information in brief messages about new consumer products. If information that matches a person's self-schema receives greater scrutiny than information that mismatches one's self-schema, one would expect to obtain an interaction between self-schema match and argument strength. Participants should form more favorable opinions of the products when the products are supported by strong, cogent information rather than weak, specious information to a greater extent in the matching rather than the mismatching condition. If the biased processing or cue alternatives are operating in this context, however, a main effect of self-schema match should occur (with matching information leading to more favorable opinions than mismatching information).

To summarize, rather than suggesting that messages that match one's self-schema are invariably more persuasive than messages that mismatch, the processing possibility suggests that, in some circumstances at least, self-schema matching messages are scrutinized more carefully. If information in matched messages is processed more thoroughly than information in mismatched messages, then matches should be more persuasive than mismatches if strong arguments are used, but matches should also be less persuasive than mismatches if weak arguments are used.

Need for cognition (Cacioppo & Petty, 1982) was used as the self-schema variable. A large body of research is consistent with the idea that individuals who are high in need for cognition are more likely than those low in this trait to engage in and enjoy cognitive activity on a wide variety of tasks (see Cacioppo, Petty, Feinstein, & Jarvis, 1996, for a review). Interestingly, research by Feinstein (1996) has demonstrated that need for cognition operates as a self-schema if the Markus (1977) criteria are used. For example, in his research, people high in need for cognition were faster to respond to questions about whether schema-consistent adjectives (e.g., thoughtful, curious) characterized them than were individuals low in need for cognition. On schema-irrelevant traits, reaction times were comparable, which suggests that high need for cognition individuals
chronically think of themselves in schema-consistent ways. If need for cognition is a self-schema, and people are more likely to process schema-consistent than schema-inconsistent messages, this raises the interesting possibility that a message that appears to be aimed at people who are not thoughtful could enhance the information-processing activity of people who generally do not like to think (because it matches their self-schema), but reduce the information-processing activity of people who generally like to think (because it mismatches their self-schema).

In our examination of this idea, students who were high or low in need for cognition received a message about a new brand of toothpaste. The message was introduced with either a high or a low need for cognition frame, and presented either strong or weak arguments about the product. After exposure to the ad (which was embedded in a series of ads for other products), attitudes toward the product were obtained. Messages that matched individuals' self-schemas (i.e., thoughtful frame for high need for cognition individuals and unthoughtful frame for low need for cognition individuals) were expected to produce greater attention to argument quality than messages that mismatched the recipients' self-schemas (i.e., unthoughtful frame for high need for cognition individuals and thoughtful frame for low need for cognition individuals). If this result was obtained, a three-way interaction between need for cognition, message frame, and argument quality should occur. The self-schema frame was accomplished by having participants read one of the following introductions immediately prior to ad exposure:

Thoughtful Frame: The following advertisement is aimed at people who very much enjoy the process of thinking. These people prefer to think long and hard about problems because they enjoy finding the not-so-obvious answer. They love learning, asking questions, and uncovering answers. In short, they just enjoy thinking.

Unthoughtful Frame: The following advertisement is aimed at people who don't enjoy the process of thinking very much. These people prefer to make snap judgments rather than thinking things out because for them, finding a quick answer is best. They "use their heads" when necessary, but they don't want their time trying to figure everything out. In short, they just don't like thinking.

After exposure to the appropriate introduction, the advertisement was presented. The first portion of the ad continued the frame established in the introduction. For example, the ad with the thoughtful introduction began with the line, "I'll bet you're the type of person who likes to think..."

3The evidence regarding whether low need for cognition was also a schema was less clear.
about the decisions you make.” The ad with the unthoughtful introduction began with the line, “I’ll bet you’re the type of person who doesn’t like to sit around and think about all of the details when you make choices.” The ad continued with either the strong (cleans your breath all day) or the weak (cleans your breath for over an hour) claims about the product.

Corresponding to the experimental design described previously, the attitude measure was submitted to a 2 (Argument strength: weak, strong) X 2 (Message type: unthoughtful, thoughtful) X 2 Need for cognition (low, high) ANOVA. Not surprisingly, strong arguments led to more favorable opinions toward the product than did weak arguments. Consistent with the hypothesis that information matching a person’s self-schema is considered more extensively than is information mismatching the self-schema, the argument strength main effect was qualified by the three-way interaction between argument strength, need for cognition, and message type (see Fig. 5.2). That is, for individuals both high and low in need for cognition, the effect of argument strength was greater when the message content matched the underlying self-schema (i.e., when thoughtful messages were presented to those high in need for cognition or unthoughtful messages were presented to those low in need for cognition) than when the message content mismatched the self-schema (i.e., when thoughtful messages were presented to those low in need for cognition or unthoughtful messages were presented to those high in need for cognition).

Given the paucity of work on self-schemas and persuasion, future work should examine the possibility that self-schema matching can serve multiple roles. That is, just as a self-schema match served to enhance the extent of information-processing activity in the study of Bizer et al. (1998), in which elaboration was not constrained to be high or low, self-schema match should serve other roles when elaboration is constrained. That is, similar to the analysis we provided for functional matching, we would expect self-schema matching to serve as a peripheral cue under low levels of elaboration likelihood, but to bias thinking at high levels of elaboration.

**Social Identity Matching**

As we noted above, a person’s self-schema consists in part of information about how a person thinks about him or herself. Investigations of the self-schema have typically examined traits around which one can be schematic (e.g., I’m independent, thoughtful, etc.). Another possible
feature of the self-concept, however, arguably involves the groups or social categories with which people identify (e.g., I'm male, a Democrat, etc.; Tajfel, 1981). Although research on social identity and self-schemas has generally been conducted within completely separate domains, the separation of these constructs in a persuasion context may be unnecessary. That is, the impact of identity variables on attitude change may be relatively indistinguishable from that of self-schema appeals. Both personal and social identities could simply reflect a "me-ness" that is activated when a persuasive message matches some aspect of the self concept.
Indeed, Deaux (1996) has argued for the interchangeability of personal- and social-identity variables. She found that social and personal identities do not differ in their content. That is, identities do not cluster along the group versus personal dimension, but rather cluster by their conceptual meaning for the individual. Thus, it seems plausible that both personal identities (e.g., self-schemas) and social identities (e.g., group memberships) might function identically in a persuasion context insofar as their conceptual meaning matches the frame or content of the persuasive appeal.

As with some functionalist researchers (DeBono & Packer, 1991), a number of identity researchers (e.g., Festinger, 1950; Mackie, Worth, & Asuncion, 1990; Turner, 1982; Turner & Oakes, 1989) have postulated that the effects of identity appeals on persuasion stem from the importance of the message to the self. Some researchers suggest that this importance stems from the need to validate one's beliefs through agreement with similar others. Another possibility is that the importance stems from the implied or explicit relevance of the communication to the group, and therefore to the self.

A review of prior theories of social identity and persuasion is beyond the scope of this chapter (but see Fleming & Petty, 1999). Perhaps the most important point about the prior literature, however, is that past theories (e.g., Deutsch & Gerard, 1955; Festinger, 1950; Hogg & Abrams, 1993; Kelman, 1961; Sherif & Hovland, 1961; Turner & Oakes, 1989) have tended to postulate a single process by which identity variables impact on attitude change. In contrast, our analysis of functional matching and self-schema matching suggests that identity matching should be capable of operating in multiple ways (see also Fleming & Petty, 1999). Perhaps of greatest interest is the idea that identity matches or appeals from in-group members need not increase persuasion. If persuasion from in-group sources is sometimes the result of effortful message scrutiny, for example, weak messages from an in-group source should be less persuasive than weak messages from an out-group source. Next, we review some of the multiple ways in which identity matching could have an impact on persuasion.

*Identity Matching as a Cue.* According to the multiple-roles framework of the F.I.M, variables are more likely to act as a cue under conditions of low elaboration. Such conditions should be more likely, for example, when an in-group or out-group member delivers a persuasive
message on a topic that is not directly relevant to the in-group. In one relevant study, Mackie et al. (1990, Experiment 2) provided a condition in which UC-Santa Barbara students read a persuasive message delivered by a member of their in-group (a student from their own school) or a member of their out-group (a student from a distant school). The message topic was not relevant to the in-group (acid rain in the Northeastern United States) and thus baseline elaboration likelihood was low. Furthermore, the position of the source was stated before the persuasive message, enabling the participants' knowledge of the source's position without processing the message. Results indicated that participants agreed more with the message when the source was a member of their in-group (i.e., matched social identity) than when the source was a member of the out-group (i.e., mismatched social identity) across both strong and weak argument conditions. In addition, cognitive responses failed to be predictive of participants' attitudes. This pattern of results is indicative of noneffortful, cue-based attitude change.

These effects might not have been driven by mere group membership, however, but by the "me-ness" aspect of identification with the group. Evidence for this perspective comes from a study by Fleming and Petty (1995a). Participants in this experiment were told the attitudes of in-group and out-group members on a series of products about which they had little or no previous knowledge. For all attitude items, the attitudes of the in-group and out-group were in the opposite direction (i.e., if one group held positive attitudes, the other held negative attitudes). Because the attitude objects were novel and unfamiliar, and because the participants were not provided with additional arguments about the products, elaboration likelihood was presumably low. Results indicated that participants held more positive attitudes when the in-group was positive than when the in-group was negative, which suggests an overall cue effect. However, this effect was moderated by level of identification with the in-group. Participants who identified highly with the in-group used the in-group position as a peripheral cue to a greater extent than people who were not identified even though the latter individuals were also nominal members of the group. This finding is consistent with the view that the "me-ness" or level of association with the self, and not in-group membership per se, is the crucial determinant of the in-group matching effect.

Identity Matching as a Determinant of Processing. According to the ELM, under conditions of moderate baseline elaboration, identity
matching should serve to determine the amount of elaboration directed at a persuasive message. Evidence for this hypothesis was provided in a second set of conditions by Mackie et al. (1990). In this experiment, participants from the University of California at Santa Barbara were provided with a message from an in-group source or an out-group source. The position of the source was again announced before the persuasive message, but this time the message concerned a topic that had some potential relevance to the in-group (offshore oil drilling in the Southwestern United States). Results revealed an interaction between the strength of the arguments used in the persuasive message (strong vs. weak) and the source of the message (in-group vs. out-group member). Participants who read the message from the in-group source differentiated between strong and weak arguments, which indicates elaboration of the message. Furthermore, the cognitive responses of participants who read the message from the in-group source were predictive of their postmessage attitudes. Participants who read the message from the out-group source, however, did not differentiate between strong and weak arguments. In addition, their cognitive responses failed to be predictive of their post-message attitudes. Thus, in this experiment, identification with the in-group member appeared to instigate greater message processing from participants.

Identity Matching as a Source of Bias. When elaboration likelihood is high, identity matching should serve to bias the thoughts an individual has in response to a persuasive message. According to our perspective, biased elaboration of arguments in response to identity appeals should be more likely to the extent that the identity appeal is seen as relevant to the self. Thus, the degree to which the appeal matches the self-identity should determine the amount of bias under high elaboration conditions.

Evidence for this hypothesis was provided in a study by Fleming and Petty (1997b). In this experiment, males and females assessed as high or low in identification with their gender were exposed to positive and negative arguments about a new snack food. All participants received both positive and negative information from both male and female sources. Thus, in one condition participants received positive information about the reactions of males and negative information about the reactions of females to the product. In another condition, participants received positive information about the reactions of females and negative information about the reactions of males to the product. Elaboration
likelihood was kept high by providing participants ample time to examine the materials and by emphasizing the importance of their later judgments about the materials.

Because all participants received both positive and negative information of equal strength regardless of the frame, they should not have differed in their final attitudes as a function of the gender message frame. If participants engaged in selective scrutiny of the information based on the identity frame, however, one would expect to see differential persuasion of participants on the basis of the match between the frame and their gender, but only if they were highly gender identified. These latter predictions, in fact, were the obtained results. Males and females who were highly identified with their gender were more persuaded by, and had more positive thoughts toward, positive messages that matched their gender than positive messages that mismatched their gender. For participants who were not highly identified with their gender, no matching effects were found. Thus, the biased elaboration was not simply a function of the match between the gender frame and the gender of the individual, but rather depended on the individual's level of identification with his or her gender. When identification was low, matching did not result in bias.

Matching the Affective Versus Cognitive Bases of Attitudes

As our final example of the generality of matching effects, we discuss a type of matching that is at the same time perhaps both similar to and different from functional matching—matching the affective versus cognitive bases of attitudes. One important point of similarity is that like functional matching, this type of matching speaks to the underlying basis of the attitude itself. That is, just as a utilitarian or a social-adjusive attitude is based on a certain type of information, so too is an affective or a cognitive attitude (i.e., the former is based on feelings, whereas the latter is based on attributes; see Breckler, 1984, Rosenberg & Hovland, 1966, Zanna & Rempel, 1988). A second similarity concerns the fact that there are individual differences in the bases of the attitude. That is, just as individuals show dispositional tendencies toward holding attitudes with different functions (Snyder & DeBono, 1989), individuals presumably also differ in their propensity to hold attitudes that are primarily affectively or cognitively based. For example, a number of individual difference scales have been developed to distinguish between "thinkers" and
"feeler," or those who tend to rely primarily on the facts or on their feelings in forming their attitudes (e.g., Epstein, Pacini, Denes-Raj, & Heier, 1996). Haddock and Zanna (1993), for example, demonstrated that individuals differ in their propensity to use affective or cognitive information in forming prejudicial attitudes. These propensities might therefore become a part of one's identity or self-concept, at least to the extent that an individual can indicate such thinking styles on self-report measures. Third, just as different attitude objects can differ in their association with a given attitude function for most people (e.g., air conditioners mostly serve a utilitarian function; Shavitt, 1989), attitude objects can also differ in whether they are primarily based on affect or cognition across people (Crites, Fabrigar, & Petty, 1994). For example, some research has suggested that people's attitudes toward food (Chattopadhyay & Latané, 1996) and health detection behaviors (Millar & Millar, 1993) are primarily affectively driven.

One salient difference, however, is that functional matching effects are presumed to occur because of some underlying need or motivational state, but this has not been postulated for the affective versus cognitive bases of attitudes. Nonetheless, if the matching of a message to the basis of an attitude invokes some type of self-relevance regardless of the nature of the attitude's basis (i.e., functional or affective/cognitive), then similar mechanisms of persuasion might be revealed. That is, messages matched to the affective/cognitive bases of attitudes might serve as cues, bias processing, or determine the extent of processing.

A number of different theories have attempted to account for the effects of affective and cognitive persuasive appeals. Initially, researchers sought to determine whether affective or cognitive appeals were generally more effective in eliciting attitude change. Following numerous inconclusive results, however (e.g., see Chen, 1933; Eldersveld, 1956; Knowler, 1935; Matthews, 1947; Weiss, 1960), contemporary theorists have focused on whether matching affective or cognitive appeals to the underlying affective or cognitive basis of the attitude was more effective. However,

*S. Some might find it implausible that this type of matching (with little motivational significance) could induce a similar "me-ness" reaction as the other types of matching we described. However, a number of studies have demonstrated that relevance to the self can be noted with only minimal effort or attention. For example, Bargh (1992) demonstrated that a variety of self-relevant words, and not just one's name, can cause interference on a dichotic listening task. Thus, messages that have some link to the underlying basis of one's attitude might invoke a sense of self-relevance at an implicit if not explicit level.
in contrast to the consistent early findings that functional content matches produce greater persuasion than mismatches (e.g., Shavitt, 1990; Snyder & DeBono, 1985), the initial work on affective versus cognitive bases of attitudes has not been consistent. For example, Edwards (1990) found that matching arguments to attitude bases was better than mismatching (e.g., an affective persuasion appeal was better than a cognitive persuasion appeal when the attitude under attack had an affective basis; see also Fabrigar & Petty, 1999). On the other hand, Millar and Millar (1990) found mismatches to be more effective.

Although these various studies have arrived at seemingly opposite conclusions, their results might be rendered coherent by applying the matching framework we advocate here (see also Petty, Gleicher, & Baker, 1991). For example, consider that the Edwards (1990) studies used attitude objects that were previously unfamiliar to research participants and persuasive treatments that seem difficult to counterargue. In contrast, Millar and Millar (1990) used attitude objects familiar to participants and arguments that seem relatively easy to counterargue. Millar and Millar (1990) found that their counterattitudinal arguments were extensively counterargued, especially when the arguments attacked the basis of the attitude. Thus, if one assumes that the arguments in the Edwards (1990) studies were stronger than those in the Millar and Millar (1990) studies, then increased scrutiny of information that matched the attitudinal base could lead precisely to the results obtained by these researchers. Alternatively, it could be that the elaboration likelihood context was lower in the Edwards (1990) than in the Millar and Millar (1990) studies. If so, matching could have served as a positive cue in the Edwards (1990) research, but affected the extent of processing in the research of Millar and Millar (1990). At present, insufficient data are available to examine the notion that matching messages to the affective or cognitive bases of attitudes can serve in the multiple roles postulated for variables outlined by the ELM. Nevertheless, this seems like a reasonable possibility to examine in future research.

SUMMARY AND CONCLUSIONS

In this chapter, we argued that persuasive appeals that match the functional basis of one’s attitude, one’s self-schema, one’s identity, or the affective-cognitive bases of attitudes might have more in common than
is presently realized. That is, each of these treatments involves a self
match—a sense that the message matches the type of person the recipient
is (or matches the type of attitude one has). Furthermore, we argued that
this self-match could influence persuasion in one of several ways specified
by the Elaboration Likelihood Model of persuasion. That is, these
matches should serve as peripheral cues when the overall likelihood of
thinking is low, bias the ongoing information processing when the
likelihood of thinking is high, and determine the extent of information
processing activity when the elaboration likelihood is not constrained to
be high or low. For some of the matching variables, such as functional
matching, there appears to be clear evidence for all three of these roles.
For other types of matching, such as affective–cognitive matching, evi-
dence for any of the roles is weak. For still other types of matching, such
as self-schema and identity matching, there is clear evidence for some roles
but not others. Future research in which the elaboration likelihood is
explicitly manipulated along with different kinds of matching variables
and argument quality should help to determine whether the integrative
framework we offer can account for the diversity of matching variables
and effects identified in the literature.

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