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Multiple Routes to Resisting Attitude Change

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As many of the chapters in this volume illustrate, attempts at persuasion might often benefit from techniques aimed at addressing the “resistance” forces working against acceptance of a persuasive appeal. For example, young smokers often resist messages aimed at getting them to stop smoking, preferring to believe that the highly publicized health risks are exaggerated or do not apply to them (e.g., Milam, Sussman, Ritt-Olson, & Clyde, 2000; see also Coleman, Stevenson, & Wilson, 2000). If one were able to convince young smokers that the risks do apply to them or that the risks are greater than they currently believe, this would certainly increase the effectiveness of an appeal that rests on these reasons not to smoke. “Addressing resistance” can also be substantially less direct. For example, Linn and Knowles (2002) increased the effectiveness of a persuasive appeal by simply acknowledging that the message recipient would probably want to disagree with the message (see also Knowles & Linn, this volume). Somewhat paradoxically, allowing people the “freedom to resist” appears to undermine the motivation to do so, consistent with what might be expected from reactance theory (Brehm, 1966).

In many situations, however, one of the primary goals of the communication is to create an attitude that does resist future attempts at change. For example, one of the most important challenges in the health domain is how to effect lasting changes in health-relevant behaviors (i.e., to create positive attitudes
toward health-enhancing behaviors and negative attitudes toward risky behaviors that persist over time, in part by resisting attempts at further change; Petty & Cacioppo, 1996). As many parents can attest, they would want very much for their children to form lasting negative attitudes toward such behaviors as smoking and taking drugs and/or lasting positive attitudes toward such behaviors as regular exercise and eating a nutritious diet. Development of such attitudes would be one primary determinant of the behaviors that would keep those children healthy over the course of a lifetime (e.g., Albarracín, Johnson, Fishbein, & Muellerleile, 2001; Kraus, 1995; Sheeran & Taylor, 1999).

In fact, much of the classic work in attitude change has dealt with the possible ways to induce, rather than reduce, the resistance property of attitudes. For example, McGuire and Papageoridis (1961; see also McGuire, 1964; Papageoridis & McGuire, 1961) noted that some of our most cherished ideals (e.g., freedom of speech) and fundamental beliefs (e.g., the value of brushing one's teeth) were highly susceptible to change and thus needed to be made more resistant. In a pioneering program of research, McGuire examined the effects of providing either supportive or weak attacking information on future resistance to change. In this research, presentation of attacking information that could be refuted (either within the message or by message recipients themselves) enhanced resistance to attacks on frequent tooth brushing. The basic idea behind this research was that "cultural truisms" such as brushing one's teeth after every meal were generally endorsed but rarely attacked and therefore rarely defended. Attacks on the endorsed belief were thought to motivate counterarguing of the attack and generation of a rationale that would support the belief. Providing support directly was found to be less successful in producing later resistance. Interestingly, weak attacks along with refutations were often approximately equal in effect, regardless of whether the attacks and refutations directly addressed the arguments to be used in later attacks or not (McGuire, 1964; McGuire & Papageoridis, 1961; Papageoridis & McGuire, 1961; see also Szybillo & Heslin, 1973) although some studies have found significant advantages for refutations that match the content of later attacking messages (e.g., Tannenbaum, 1967). The applied significance of inoculation theory is clear, and inoculation treatments have also been shown to effectively increase resistance to development of risky health behaviors such as smoking (e.g., Pfau, Van Bockern, & Kang, 1992).

Like the research by McGuire and colleagues, much work in attitudes has regarded "resistance" as strongly tied to counterarguing of attacking messages. For example, work on forewarning of persuasive intent has focused on mechanisms such as anticipatory counterarguing as important in producing resistance to the upcoming message (e.g., Petty & Cacioppo, 1977; Quinn & Wood, this volume). Yet, there might be a variety of reasons for attacking messages to be ineffective. For example, messages might also be ineffective because recipients of the message engage in attitude bolstering (i.e., selective generation or recall of information supportive of their attitudes; Lewan & Stotland, 1961; Lydon, Zanna, & Ross, 1988; Briñol et al., this volume) or because they derogate the source of the message (e.g., Tannenbaum, Macauley, & Norris, 1966; Zuwerink
& Devine, 1996). In this chapter, we begin by discussing some different ways to think about what “resistance” is and from whence it comes. Within that context, we describe a variety of mechanisms that can result in resistance to change, paying special attention to the amount of information processing involved in those mechanisms. In so doing, we also present ongoing research that illustrates both thoughtful and noughtful processes by which resistance can occur. The amount of thought that goes into opposing a message should be particularly important, in part because attitude change outcomes that involve high levels of information scrutiny generally have stronger and more enduring consequences than outcomes that involve lower levels of information scrutiny (Petty, Haughtvedt, & Smith, 1995). Learning about the processes that lead to resistance also puts one in a much stronger position to intervene and change a resistance outcome, because a process-level understanding of the phenomenon would often provide predictions about when the processes occur and what types of circumstances could limit or change the operation of those processes.

THE ATTITUDE STRENGTH BACKDROP

Over the past 10 to 15 years, there has been a great deal of interest in the overall “strength” of attitudes, with strength defined in terms of the forces the attitude can withstand and create. That is, Krosnick and Petty (1995) defined strength in terms of the persistence of the attitude over time (withstanding the force of time), the resistance of the attitude to attack (withstanding the force of opposing persuasive appeals), and the ability of the attitude to guide related thoughts and behavior (creating a force that guides cognition and action; see also Eagly & Chaiken, 1993, 1998; Petty & Wegener, 1998).

Many properties of attitudes have been identified as increasing attitude strength. For example, attitudes are more likely to guide behavior when they are accessible (i.e., when they come to mind quickly upon encountering the attitude object, see Fazio, 1995) and when they are based on high levels of attitude-relevant knowledge (e.g., Davidson, Yantis, Norwood, & Montano, 1985) or on beliefs that are consistent with the overall evaluation (Norman, 1975; see Petty & Krosnick, 1995, for reviews of many strength-related properties of attitudes).

Our own research on attitude strength has focused on the elaboration (thoughtful processing) of attitude-relevant information. Attitudes based on high, rather than low, levels of elaboration have been found to persist longer over time, to resist the opposing persuasive messages better, and to predict more accurately future behavior (see Petty, Haughtvedt, & Smith, 1995, for a review). For example, Petty, Haughtvedt, Heesacker, and Cacioppo (1995; discussed by Petty, Haughtvedt, & Smith, 1995) manipulated the personal relevance of a strong (compelling) persuasive message that was also attributed to three expert sources. Attitudes following the message were equally extreme for people who encountered the message under conditions of high and low personal relevance. How-
ever, these two groups were differentially affected by a second message on the same topic that argued weakly for the opposite view from that of the first message. The people for whom the topic was low in relevance (and who, presumably, arrived at their initial attitudes because of peripheral cues such as the expert sources in the first communication; Petty, Cacioppo, & Goldman, 1981) changed their attitudes more following the (second) weak opposing message than did people for whom the topic was high in relevance (whose attitudes were presumably based on careful processing of the strong message arguments). Similar effects have been observed when levels of elaboration have been indexed via relevant individual differences (Haugtvedt & Petty, 1992) such as “need for cognition” (NC; Cacioppo & Petty, 1982b). According to the Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1986a), this is because attitudes based on high levels of elaboration should have strongly interconnected cognitive and affective structures, structures that are not only internally relatively complex, but are also more likely to be linked to related attitudes and information (Petty, Haugtvedt, & Smith, 1995; see also Eagly & Chaiken, 1998). Such strong, interconnected structures should provide informational resources useful in defending the attitude from attack and should also create stronger motives to resist future changes in the attitude (e.g., because the interconnected structure could provide a larger number of elements supporting a general cognitive consistency, the undermining of which would be aversive, e.g., Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968).

A critic might interpret these elaboration-resistance studies as showing simply that people high in elaboration (based on individual differences or manipulations of processing motivation) take on attitudes that are consistent with the arguments that are available in the entire setting (i.e., strong arguments on one side, and weak on the other), whereas people low in elaboration take on attitudes more consistent with the available cues (e.g., an expert source on each side of the issue). However, similar resistance effects of elaboration have also been found when the attacking message contains arguments as strong as those in the initial message. For example, Haugtvedt and Wegener (1994) used opposing messages pretested as equally strong and presented them to research participants in either a pro/con or con/pro order. For example, in one study, participants either received a message in favor of building new nuclear power plants followed by a message opposed to such plants or received the same messages in the reverse order. Therefore, the same messages sometimes served as the initial message and sometimes as the attacking message (thereby totally equating the strength of initial and attacking messages). Similar to the previous ELM research, participants either thought that nuclear power plants were being considered for construction in their own and neighboring states (high personal relevance) or in distant states (low personal relevance). Consistent with higher levels of resistance being associated with attitudes based on high levels of elaboration, Haugtvedt and Wegener (1994) found primacy effects (greater influence of first than second messages) when personal relevance was high, but found recency effects (less influence of first than of second messages) when personal relevance was
low. In addition, when elaboration was high rather than low, attitudes were more highly correlated with thoughts listed by participants as having come to mind while reading the messages, and a larger number of direct counterarguments were generated and listed as coming to mind in response to the second (attacking) message.

High levels of elaboration of an initial attitude have also been shown to decrease later persuasion (i.e., to increase resistance) in face-to-face communication. For example, Shestowsky, Wegener, and Fabrigar (1998) provided people high and low in need for cognition (NC; Cacioppo & Petty, 1982b) with diverging information about a civil court case before the people were split into pairs with each pair including one person high in NC and the other low, to discuss the case and arrive at a consensus in their dyad. Shestowsky et al. expected that high-NC people would form opinions of the case that were based on higher levels of elaboration than for their low-NC counterparts. The diverging information about the case meant that the high- and low-NC people began their dyadic discussion disagreeing about the appropriate verdict in the case. Consistent with high levels of elaboration leading to greater resistance to change (as well as other related strength properties), the pre-discussion views of people high in NC better predicted the dyadic decisions. Also, Johnston, Fabrigar, Wegener, and Rosen (2002) found that the level of elaboration (manipulated to be high or low using a combination of high personal relevance with low distraction or low personal relevance with high distraction) can influence the strength of majority versus minority influence effects in group discussions. Majority and minority opinions were created by distributing the same diverging descriptions of a civil case used by Shestowsky et al. (1998). As in much majority/minority research, in the Johnston et al. study, majority views best predicted group decisions. However, this majority influence pattern was enhanced if the majority also elaborated the initial information more than the minority. In contrast, if the minority elaborated more than the majority, it decreased the majority advantage in group decisions.

ALTERNATIVE WAYS TO DEFINE RESISTANCE

Perhaps the most typical approach to resistance, and the approach that has been illustrated in each of the preceding lines of research, has been to treat resistance as a property or quality of the attitude itself. As noted earlier, for example, the objective of McGuire’s (1964) research was to increase the resistance to change of each “cultural truism.” This was accomplished by enhancing both ability and motivation to counterargue the attacking message. In fact, this active counterarguing is also often implied by the term “resistance” (see Quinn & Wood, this volume). Treating resistance as due to the process of counterarguing might follow from the conception of resistance as a property of the attitude in that in-
creases in elaboration (thinking) about the attitude object (which creates resistant attitudes) should activate related knowledge that can be used to counterargue later opposing messages. Just as highly elaborated attitudes are more likely to guide behaviors, attitudes based on extensive thought should also guide related information processing. This could often include interpreting information in opposing messages as failing to compel the person away from his or her existing opinions (see later discussion of use of attitudes in later information processing). Also, an attitude linked to many related attitudes and other knowledge structures might make people more motivated to maintain that attitude in face of attack.

In many circumstances, however, it might be useful to think about resistance somewhat more broadly (see also Petty, Tormala, & Rucker, in press). That is, in addition to resistance as a property (quality) of an attitude and as the active process of counterarguing, one might consider resistance as a motive or as a persuasion outcome. Consideration of resistance as an outcome of persuasive attempts would prompt a treatment of resistance that is more parallel to contemporary treatments of persuasion. As noted by Petty, Tormala, and Rucker (in press), resistance can be the result of many different processes. Most important for the current discussion, we would emphasize that some of the processes that lead to resistance outcomes (i.e., relative lack of change) are more thoughtful than others. Just as it has been important to dissociate outcome from process in work on persuasion (see Petty & Wegener, 1999), it should be equally important to dissociate the resistance outcome from the responsible processes.

Resistance as an Outcome

In traditional studies of resistance to persuasion, the level of resistance for a particular attitude is indexed by the relative lack of change in the face of a persuasive appeal that attacks the person’s initial attitude. For example, when comparing attitudes based on high versus low levels of elaboration, resistance of those attitudes to change has been indexed by the relative amount of change (with attitudes based on high levels of elaboration generally changing less than attitudes based on low levels of elaboration, e.g., Petty, Haugtvedt, et al., 1995). In many of these studies, there has been some movement toward the attacking message, but lack of full acceptance of the opposing view suggests that there have been at least some forces at work that resist change. Therefore, most resulting attitudes (which fall between the initial attitude and the position advocated by the attacking message) are the result of some persuasion—movement toward the message—and some resistance—lack of movement toward the message. If resistance and persuasion can be thought of as part and parcel of the same outcome (i.e., if the same change in attitudes can be thought of in terms of amount of persuasion and in terms of amount of resistance), this would suggest that one should ask conceptual questions that are parallel for persuasion and resistance. Yet, because studies of resistance have tended to focus on resistance as a property of the attitude (or as the result of a specific process such as
counterarguing), researchers have not generally asked questions about resistance that parallel the questions asked about persuasion.

As is well-documented in the attitudes domain, one persuasion outcome can occur for many different reasons. For example, imagine that one is studying reactions to an advertisement for a certain type of exercise equipment. Also, imagine that the ad results in more favorable attitudes toward the equipment when the ad is encountered in the middle of a funny situation comedy than when the ad is encountered within a more neutral, but equally popular, nature show. One might understand this outcome as increased persuasion occurring when message recipients are in a positive mood (e.g., Petty, Fabrigar, & Wegener, 2003). Yet, in contemporary persuasion research, such a conclusion would barely be a beginning. A natural question stemming from current dual-process (Chaiken & Trope, 1999) or multiprocess (Petty & Cacioppo, 1986a; Petty & Wegener, 1999) theories would be, “Which processes and factors led to the research outcome?” That is, happy mood could lead to positive attitudes because message recipients were not thinking much (because they were distracted or uninterested) and positive mood served as a peripheral cue (Petty & Cacioppo, 1986b) or heuristic (Cacioppo & Petty, 1982a; Chaiken, 1987; Schwarz & Clore, 1983). However, the same outcome (greater persuasion in a positive mood) could also come about: (a) if message recipients are thinking a lot, but positive mood biased the interpretation of ambiguous information about the product (e.g., Petty, Schumann, Richman, & Strathman, 1993) or served as a strong merit of the product (i.e., if the product was viewed more favorably because use of the product simply makes one feel good, see Petty, Cacioppo, & Kasmer, 1988); (b) if positive mood decreased processing of the message and the message contained rather weak arguments supporting purchase of the product (Schwarz, Bless, & Bohner, 1991); (c) if positive mood increased processing of the message and the message contained strong arguments supporting purchase of the product (Wegener, Petty, & Smith, 1995); or (d) if message recipients realize that positive mood can sometimes lead to negative biases (e.g., Dermer et al., 1979; Wegener, Petty, & Klein, 1994) and they attempt to correct (compensate) for this presumed bias (DeSteno, Petty, Wegener, & Rucker, 2000; Wegener & Petty, 1997).

According to the ELM, each of these processes would be most likely under a specific set of conditions. That is, the “cue effects” of mood would be most likely when motivation or ability to process is low. The “biased processing” and “argument” effects are most likely when motivation and ability are high (depending on the ambiguity of the object-relevant information, cf., Chaiken & Maheswaran, 1994, and the ease of processing the mood as an argument; see Wegener & Petty, 2001). The “amount of processing” effects are most likely when background levels of elaboration are not constrained to be high or low. Finally, according to the Flexible Correction Model, the correction effects are most likely when the issue of potential bias is salient to the message recipient (depending on factors such as the amount of previous experience with the per-
ceived bias and relevant correction), and people are motivated and able to correct for the perceived bias (Wegener & Petty, 1997; Wegener, Dunn, & Tokusato, 2001; see Wegener & Petty, 2001, for a discussion of the multiple processes by which mood can influence post-message attitudes and judgments).

It is important to understand which process(es) led to a particular outcome, in part, because the process of change will help determine how long that change lasts, whether the change translates into changes in behavior, and whether the new attitude guides future information processing and judgment (e.g., Petty, Haugtvedt, & Smith, 1995). If the process was more elaborate (i.e., if the effect was due to biased processing, use of mood as an argument when processing is high, increases in thought about strong arguments, or effortful corrections for perceived negative biases), then the resulting attitude would be hypothesized to last longer and to guide future behavior, information processing, and judgment to a greater extent than if the process leading to the same judgment was less thoughtful. Of course, when elaboration is high, the resulting attitude is also hypothesized to resist future attempts at change better—resistance as a property (quality) of the attitude.

Knowing which process(es) leads to a persuasion outcome also equips one to predict which types of factors might influence when the outcome occurs, and how one might change or overcome that result. For example, if one finds that persuasion is the result of effortful processing, this implies that overcoming that persuasion would often be better accomplished through introducing substantive information that counters the implications of the message arguments rather than introducing a credible or attractive source that advocates an alternative position. However, if the persuasion result is coming about under conditions of relatively little thought, the introduction of new arguments might be less successful than the introduction of salient sources or other cues.

Parallel Treatment of Resistance

But what if message recipients successfully ward off any impact of the exercise ad? One could easily treat this resistance outcome in a manner that directly parallels the processes considered as responsible for the persuasion outcome. For example, what if one were to find relative lack of change by message recipients who received the exercise ad in a positive (comedy) program? These message recipients might have failed to change because they were unmotivated or unable to process the message and used some negative aspect of the source as a rejection cue (e.g., self-interest of the source making him or her appear untrustworthy). Alternatively, recipients might have engaged in more thoughtful (and biased) processing of the ad that led to counterarguing it and maintaining the original attitude. Lack of change could also spring from relatively high levels of processing of arguments that are relatively weak, or low levels of processing of arguments that are relatively strong. Finally, lack of change could result from corrections for perceived positive biases.5
Therefore, viewing resistance as an outcome can lead one to think about resistance questions in much the same way one thinks about persuasion questions. If most persuasion outcomes actually represent some level of persuasion (change toward the message) and some level of resistance (lack of change toward the message), then many of the process questions should be conceptually similar. Though generally discussed using “persuasion” terminology, reactions to most messages could be thought of as involving some resistance. After all, in a world with absolutely no resistance, people would completely accept the advocacy of all messages they receive. Of course, this does not happen, and likely for many different reasons. The task, then, for investigations of resistance is similar to the task in studies of persuasion—to discover the reasons why lack of change (or presence of change) occurred.

**Effortful Versus Noneffortful Resistance**

In some initial data, Haugtvedt and Wegener (2002) accumulated evidence of both effortful and noneffortful resistance to persuasive appeals. Part of this study was patterned after the Petty, Haugtvedt, et al. (1995) and Haugtvedt and Petty (1992) research mentioned earlier. That is, equal pre-attack attitudes were created for people at high and low levels of processing of an initial message. In the current case, amount of processing was influenced by a manipulation of personal relevance (Petty & Cacioppo, 1990), and the initial communication contained both strong arguments in support of the advocacy (establishment of a comprehensive exam graduation requirement) and a credible source (a Princeton Professor of Education). When research participants received an attacking message similar to the attacking messages used by Petty, Haugtvedt, et al. (1995) and Haugtvedt and Petty (1992)—weak arguments with credible sources—the results looked much like those previously obtained. That is, attitudes initially based on high levels of information processing were less likely to change in response to the opposing message. This pattern replicated the previous “active resistance” results in which “strong attitudes” led to counterarguing of attacking messages (e.g., Haugtvedt & Petty, 1992; Haugtvedt & Wegener, 1994). However, when the weak attacking message was presented by a noncredible source (i.e., a janitor from Michigan State University), both people for whom the topic was relevant and those for whom the topic was irrelevant changed relatively little in response to the attacking message (see Fig 2.1). This suggests that both change and lack of change in response to the attacking message were based in relatively peripheral processes for people who received the messages in conditions of low personal relevance. This also suggests that lack of change in the face of attack can be relatively thoughtful or nonthoughtful.

Such claims treat resistance outcomes as the result of process rather than as a property of the attitude per se. In certain respects, the idea that resistance can be relatively nonthoughtful or thoughtful might appear similar to the notion that
FIG. 2.1. Resistance as a function of personal relevance and source of the attacking message (from Haugevedt & Wegener, 2002).
"defense motivation" can be served by both "heuristic" and "systematic" processing (e.g., Giner-Sorolla & Chaiken, 1997). Consistent with our emphasis on multiple processes by which such outcomes can occur, however, we believe that one must also be careful not to make one particular motivation isomorphic with the outcome. Just as one can obtain an outcome because of different processes, the same outcome (or even the same process) could be the result of different motives.

Consider a researcher that attributes resistance outcomes to "defense motivation." The outcome (i.e., lack of change) or the process (e.g., source derogation or counterarguing) could come about because of a motive to "defend" the attitude, but it could also come about for other reasons. The presence or absence of such "defensiveness" might or might not covary with the outcome. For example, when one looks at the Petty, Haugtvedt, et al. (1995) data, one might assume that people with attitudes based on high levels of elaboration experience greater "defense motivation" when they encounter the attacking message, and that this is why they change less than people with attitudes based on low levels of elaboration. However, this assumption would not necessarily hold up well when considering the Haugtvedt and Wegener (2002) data described earlier. In that study, both defense "motivated" and "unmotivated" individuals (i.e., people with attitudes based on high and low levels of elaboration) change equally little when the attacking message is presented by a noncredible source. Therefore, if defense motivation is associated with elaboration, the Haugtvedt and Wegener (2002) data show resistance with little defense motivation. Alternatively, if one were to assume that elaboration is not associated with defense motivation, then the Petty, Haugtvedt, et al. (1995) data (and the credible source conditions of the Haugtvedt and Wegener [2002] study) show differences in amount of resistance without differences in defense motivation.

Equally important, one could imagine a variety of settings in which message recipients would want very much to keep their existing attitude, not because they are motivated to defend the attitude per se, but because they are highly motivated to hold correct or accurate attitudes (see Petty & Cacioppo, 1986b). Even if one were perfectly happy to adopt another position if it is correct, the current attitude might be kept precisely because the current attitude is believed to be correct (Petty, Priester, & Wegener, 1994; Petty & Wegener, 1999; see Petty, Tormala, & Rucker, in press, for a discussion of the various sources of a "resistance motive," including accuracy).

THOUGHTFUL AND NONTHOUGHTFUL USE OF ATTITUDES IN RESISTANCE

Even without considering "defense" or "resistance" motives, one could find similar resistance outcomes for more "cognitive" reasons. For example, attitude-relevant knowledge might predispose certain interpretations of information (Evans & Petty, 1998). That is, information that is at all ambiguous might be
understood by using knowledge that inherently supports one’s current attitude. In fact, rather than attributing biased processing of information to attitude-related knowledge per se, one might also think about various situations and ways in which people might use the evaluative implications of their attitudes in assessing new information. Consistent with the thrust of the rest of this chapter, use of one’s current attitude could be relatively thoughtful or nontthoughtful.

Use of an attitude would be directly relevant to issues of resistance in that use of an attitude as a cue would generally be as a “rejection” cue (i.e., it would be un-
usual to receive a message that advocates exactly the attitudinal position one already espouses). Fabrigar, Petty, Wegener, Priester, & Brooksbank (2002) exam-
ined the thoughtful and nontthoughtful impact of existing attitudes on reactions to generally counter-attitudinal messages. At the beginning of the study, attitudes were measured regarding the building of additional nuclear power plants. Whereas most initial attitudes were somewhat favorable toward such plants, all re-
search participants received a message that argued against nuclear power. Some participants encountered the written messages with little distraction and assumed that the proposed nuclear plants would be built in geographically close locations (high elaboration conditions), whereas other participants believed that plants were being proposed for distant locations and encountered the written messages while concurrently completing an auditory distraction task (low elaboration conditions).

A manipulation of argument quality showed that the elaboration manipulation was successful. That is, the quality of arguments (strong, mixed, or weak) influenced both post-message attitudes and thoughts to a greater extent when personal relevance was high and distraction was low than when personal relevance was low and distraction was high. Consistent with the message being counter-
attitudinal for most people, significantly more counterarguments (thoughts in opposition to the message) were generated in conditions of high rather than low elaboration. Also, the number of counterarguments was better predicted by pre-
message attitudes when elaboration was high rather than low.

The top panel of Fig. 2.2 presents the pre-message attitudes, post-message attitudes, and overall favorability of listed thoughts ([proarguments-counterarguments]/total topic-related thoughts) for people in the low-elaboration condition. These paths represent the impact of pre-message attitudes and thoughts controlling for the impact of argument quality. Pre-message attitudes significantly predicted both post-message attitude and thoughts, and thoughts predicted post-message attitudes. Because of the large sample size in the study, the signifi-
cance of each path is not surprising. After all, the notion of an elaboration continuum in the ELM suggests that both “central” and “peripheral” processes will have at least some impact on attitudes everywhere on the continuum except the theoretical endpoints of the continuum (see Petty & Wegener, 1999). Consistent with the logic of the ELM, however, impact of “central merits” of the attitude object should increase with higher levels of processing, but impact of “peripheral cues” should decrease as processing increases.

Comparing the top and bottom panels of Fig. 2.2, one sees that direct impact of pre-message attitudes on post-message attitudes decreases as one goes from
the low-elaboration conditions to the high-elaboration conditions. Also, the impact of listed thoughts on post-message attitudes is greater in high- than in low-elaboration settings (see also Chaiken, 1980; Petty & Cacioppo, 1979). Just as importantly, the impact of pre-message attitudes on listed thoughts is greater in high- than in low-elaboration conditions. Therefore, the Fabrigar, Petty, et al. (2002) data suggest both thoughtful and nonthoughtful use of attitudes in information processing. When motivation and/or ability are lacking, attitudes can be used rather directly to reject (or, for some people, accept) the message advocacy. In such settings, the pre-message attitudes are not providing a strong guide for active resistance processes, such as counterarguing. When motivation and ability are higher, however, pre-message attitudes guide information processing, resulting in more negative cognitive responses to the message when pre-message attitudes are more negative toward the advocacy. Both thoughtful and nonthoughtful uses of attitudes increase the similarity between pre-message and
post-message attitudes. But, of course, the more thoughtful route to this resistance to change would be predicted to last longer and produce a stronger guide to future thought and action. Therefore, the impact of prior attitudes provides yet another example of a setting in which it is useful to go beyond a persuasion (or resistance) outcome to learn about the process(es) responsible for the effect.

Consistent with prior treatments of resistance as a property of the attitude, it could well be that “strong” attitudes create each of the current effects to a greater extent than “weak” attitudes. A finding of attitude strength effects alone, therefore, would not necessarily distinguish between thoughtful and nonthoughtful resistance processes. Incorporating the methodological tool of manipulating argument quality would be perhaps the most valuable addition to many studies of resistance (or, similarly, the manipulation of salient peripheral cues, such as source credibility, e.g., Haugevedt and Wegener, 2002).

**ACCEPTANCE AND RESISTANCE PROCESSES**

Our discussion thus far has illustrated thoughtful and nonthoughtful processes in resistance outcomes. Thinking of resistance as the outcome of relative lack of change, rather than as one particular process (i.e., counterarguing) or motive (i.e., defense motivation), opens up the topic of resistance to many of the same process questions common in the attitudes and persuasion literature more generally. That is, in many persuasion settings, there are likely to be potentially thoughtful mechanisms of resistance (e.g., counterarguing weak arguments) as well as nonthoughtful mechanisms of resistance (e.g., rejecting on the basis of negative cues). But just as persuasion through thoughtful mechanisms lasts longer and influences later thoughts and behavior to a greater extent than persuasion through nonthoughtful mechanisms (Petty, Haugevedt, & Smith, 1995), the same should be true of resistance through thoughtful versus nonthoughtful means. In addition, knowing how and why someone resists change would presumably put one in a better position to create an effective persuasive appeal. That is, similar to the focus of many chapters in this book, we would assert that understanding resistance can set the stage for more effective attempts at persuasion. However, understanding the processes that underlie resistance also allows one to address a more traditional and equally important goal. That is, understanding resistance can also lead to creation of more resistant attitudes in areas that communicators find of crucial importance (e.g., health, education, religion, etc.).

Although we have focused on the production of resistance, whereas the majority of chapters in this volume focus on reducing resistance, there is perhaps at least one additional point of similarity between our approach and that of the other chapters. In a variety of these chapters, resistance is treated as a somewhat separate force or entity from persuasion or acceptance (e.g., see Fuegen &
Brehm, this volume; Jacks & O’Brien, this volume; Knowles & Linn, this volume). Similarly, in our approach, one might specify relatively thoughtful versus nonthoughtful resistance processes and relatively thoughtful versus nonthoughtful acceptance processes. These are often conceptually parallel. For example, as we noted earlier, counterarguing would often be a relatively effortful resistance mechanism. But, of course, one can also generate supportive cognitive responses in the process of effortfully scrutinizing information. And this “proarguing” would increase acceptance rather than resistance. In terms of relatively noughtful resistance versus acceptance processes, one might compare source derogation (cf., Festinger & Maccoby, 1964) with source acceptance via heuristics such as “experts can be trusted” (Chaiken, 1987). As demonstrated by Fabrigar, Petty, et al. (2002; see earlier description), message recipients can use their own preexisting attitudes as either relatively simple rejection cues or more thoughtfully, as the attitudes and associated knowledge form the context in which message arguments are interpreted, scrutinized, and often rejected. Of course, in those circumstances where people receive messages that agree with their existing opinions, these attitudes could be used in thoughtful or noughtful ways to accept the advocacy.

When one considers separable resistance and acceptance mechanisms, the process–outcome relation also might become a bit more complicated. For example, differences in persuasion outcome could be because of differences in resistance processes, acceptance processes, or both. For example, although the number of favorable cognitive responses might often be highly (negatively) correlated with the number of unfavorable cognitive responses, one could imagine certain outcomes being attributed primarily to the favorable or to the unfavorable thoughts.

In this context, it is also important to note that a variety of individual and situational factors could increase each of these types of mechanisms. For example, counterarguing can be increased by encountering weak rather than strong arguments (Petty & Cacioppo, 1979) or by receiving a message that disagrees more extremely with one’s preexisting views (Brock, 1967). Interestingly, receiving a message from an expert source can either decrease the generation of counterarguments (Cook, 1969; if the person is open to persuasion, Hass, 1981) or increase the generation of counterarguments (if the person is already committed to his or her attitude position, see Hass, 1981). Consistent with our earlier discussion of motives, one should also note that each of the resistance processes could be enhanced by a variety of motives. For example, when a message consists of relatively weak arguments, counterarguing can be increased by increasing the motive to seek correct (accurate) attitudes in addition to increasing motives to defend the attitude. Similarly, resistance and persuasion outcomes could be influenced by a variety of other motives such as managing impressions (Chaiken, Liberman, & Eagly, 1989; Leippe & Elkin, 1987), preserving the fairness of decisions or procedures (Fleming, Wegener, & Petty, 1999), or defending disadvantaged groups (Petty, Fleming, & White, 1999). As with any other type of possible distinction in social psychology, the ultimate utility of
making the distinction (in this case, between resistance versus acceptance processes or among different possible motives) is in the ability to predict and obtain differences in judgment outcomes or consequences of those judgments.

RESISTANCE AND CORRECTION

To this point, we have focused on persuasion processes (e.g., use of peripheral cues, scrutiny of central merits, counterarguing) that often occur when people are simply seeking “correct” attitudes. This “seeking,” described in such theories as the ELM (Petty & Cacioppo, 1986b) and Heuristic-Systematic Model (HSM; Chaiken, Liberman, & Eagly, 1989), might be thought of as similar to the “promotion” orientation described by Higgins and colleagues (see Higgins, 1999) in that people are attempting to “approach” correct attitudes (see the left side of Fig. 2.3; Wegener & Petty, 2001). In seeking correct attitudes, however, people often end up using (or being affected by) factors of which they are unaware. For example, people might often fail to realize that their attitudes have been affected by the mood they experience when they encounter a persuasive appeal (Petty, Fabrigar, & Wegener, 2003; Wegener & Petty, 1996). In some circumstances, however, people might realize that there is something inappropriate or illegitimate about their reactions to social stimuli. For example, attention might be drawn to a cause of current mood (e.g., Schwarz & Clore, 1983), and people might believe that positive moods can make perceptions of social stimuli unduly positive (e.g., Petty & Wegener, 1993). If social perceivers come to realize the impact of “biasing” factors, they might focus more on “avoiding” these factors, rather than purely “seeking” information about the attitude object (see the right side of Fig. 2.3). In such cases, the processes described by models of bias correction might dominate or be added to the processes described by traditional persuasion theories.
Our own work on bias correction has been guided by the Flexible Correction Model (FCM; Wegener & Petty, 1997). Within this view, attempts at avoiding bias are guided by peoples' naive theories of bias. That is, people's perceptions of the bias at work should often guide their attempts at removing or avoiding that bias. So, if a person believes that positive moods make perceptions unduly positive, then realizing that one is in a positive mood could actually make one's judgments less positive (e.g., DeSteno et al., 2000). If, however, a person believes that the same positive mood makes judgments unduly negative, as they sometimes do (e.g., Dermer, Cohen, Jacobsen, & Anderson, 1979), then realizing that one is in a positive mood could make the person's judgments even more positive. It is important to note that these perceptions of bias need not be accurate assessments of the bias actually at work (e.g., Petty & Wegener, 1993; Wegener & Petty, 1995; Wilson & Brekke, 1994). Therefore, attempts at avoiding bias can sometimes decrease the ultimate bias in judgments, but they could also create or increase biases (depending on the accuracy of perceivers' theories of bias).

Recent attitudes research has illustrated the ability of bias correction to remove and to create biases. For example, Petty, Wegener, and White (1998) exposed message recipients to a counter-attitudinal message presented by either a likeable or dislikeable source. Consistent with past research (Chaiken, 1980; Petty, Cacioppo, & Schumann, 1983), source likeability (being irrelevant to the substantive merits of the position advocated) influenced attitudes only when motivation and ability to process were relatively low. Source effects were markedly different, however, when message recipients were asked not to let "non-message" factors (such as reactions to the source) influence their perceptions of the message advocacy. When alerted to possible bias, the source effects observed in low-elaboration conditions were eliminated. However, when alerted to the same possible bias, participants in high-elaboration conditions (who did not show any source bias when not alerted to potential bias) reported more favorable attitudes when the source was dislikeable rather than likeable. That is, corrections for a nonexistent bias actually created the opposing bias! The same source characteristic that produced relatively nonthoughtful resistance when thought was at low levels produced the highest levels of persuasion when thought was high and message recipients were concerned about possible bias.

These results illustrate a number of characteristics of theory-based corrections. As noted earlier, theories of bias need not be accurate to be used (or misused). In many circumstances, the perceived bias is used even when the perception of bias is far from accurate. Part of the problem for social perceivers is that they do not have a control group for social perceptions. For example, slightly negative views of a message advocacy might be appropriate given the person's assessment of the (counterattitudinal) information in the message. However, the same perception might be negatively biased by a dislikeable source, positively biased by a likeable source, or negatively biased by previous attitudes. It many settings, it is likely very difficult for social perceivers to tell when perceptions are biased and when they are not (cf., Nisbett & Wilson, 1977).
These results also show that “seeking” of correct attitudes can lead to different outcomes than attempts to “avoid bias.” As previously studied by ELM and HSM researchers, people can sometimes seek correct attitudes in thoughtful ways, but at other times in nonthoughtful ways. When this seeking is thoughtful, effects of peripheral cues are less likely. Yet, efforts to avoid potential bias (it might often be the case that use of peripheral cues is seen as “undue” influence) can actually create the opposing bias in judgment. In some settings, “seeking correctness” and “avoiding bias” can result in similar outcomes (e.g., compare the Petty et al., 1998, low-thought conditions with correction instructions and the high-thought conditions without correction instructions). However, high levels of “seeking correctness” do not necessarily include explicit consideration of potential biases. If they did, then corrections following high-thought consideration of a persuasive message would be likely to be smaller or nonexistent in comparison with corrections following low levels of thought about the persuasive appeal.

Regarding the current emphasis on consequences of processes responsible for resistance effects, it is important to note that corrections could differ in the extent of elaboration that goes into that correction. In some cases, corrections could be guided by naive theories with little or no reconsideration of judgment-relevant information. At other times, however, theories of bias might be used to help the person interpret and (re)consider the implications of relevant information. Similar to the expectations for ELM-based persuasion processes, corrections based on higher levels of information processing are expected to result in stronger perceptions of the judgment target (i.e., perceptions that last longer over time, that better resist information aimed at changing that view, and that more strongly guide future information processing and behavior; see Wegener & Petty, 1997).

Some existing persuasion effects could be thought of as instances of bias correction. For example, Sagarin, Cialdini, Rice, and Serna (2002; Sagarin & Cialdini, this volume) taught social perceivers to identify “illegitimate” sources and to reject their messages. In addition, they found that perceivers were likely to do this primarily when they believed that they were susceptible to the “undue” positive influences of these sources. That is, similar to the processes outlined in the FCM (Wegener & Petty, 1997; Wegener et al., 2001), message recipients are most likely to avoid unwanted positive influences of illegitimate sources when they are motivated and able to identify and correct for those perceived biases. One might account for such effects using other explanatory mechanisms (see Sagarin et al., 2002), but the explicit alerting of message recipients to unwanted influences would seem likely to activate “bias avoiding” processes. Therefore, corrections for perceived positive biases, (e.g., in illegitimate positive sources) could increase resistance, whereas corrections for negative biases (e.g., a dislikeable source) could decrease resistance (e.g., Petty et al., 1998).

One might also think about studies of the sleeper effect (when messages are discounted upon presentation, but are later found to influence attitudes in a message-consistent direction; e.g., Gruder, Cook, Hennigan, Flay, Alessis, & Halamaj, 1978; Pratkanis, Greenwald, Leippe, & Baumgardner, 1988) as in-
volving corrections for bias. That is, in many sleeper studies, the initial discounting of the message could be thought of as a correction for the perceived message-consistent effects of the message (see Priester, Wegener, Petty, & Fabrigar, 1999). For example, it might be likely that messages seen as having little influence (e.g., because they consist of weak arguments) would receive little discounting and therefore show little, if any, "sleeper effect" (cf., conditions for the sleeper effect laid out by Gruder et al., 1978). As noted by Priester et al., (1999), the relative persistence of effects of the message and the relative lack of persistence of effects of the discounting cue suggest that the sleeper effect requires relatively extensive processing of the initial message (see also Petty & Cacioppo, 1986a) with relatively low levels of effort given to the correction (discounting). In other words, the resistance instilled by the discounting cue is relatively short lived, in part, because the effort that went into that discounting (correction) was considerably less than that given to the processing of the message content. However, if one were to increase the processing that goes into the resistance-producing correction per se, then the resistance should persist to a greater extent. Of course, this persistence of resistance would decrease sleeper effects (see Priester et al., 1999).

SO, MESSAGE RECIPIENTS DID NOT CHANGE

From this ELM/FCM theoretical orientation, what would be the natural questions to ask after obtaining a "resistance" outcome? Put another way, what research questions might follow discovery of a technique that increases (or decreases) resistance? For example, after finding that attitudes change less if they have been previously attacked by a weak "inoculation" (McGuire, 1964), one might ask a number of relevant questions. One could ask "ELM" questions. Was the increased resistance effortful (e.g., because of counterarguing weak arguments or biased processing of ambiguous information) or noneffortful (e.g., because of focusing on rejection cues)? Did the resistance-producing intervention affect the amount of processing of the later attacking message? Was the resistance a product of message recipients using their existing attitudes to guide information processing and/or judgment, or were other factors responsible? Depending on whether the resistance was effortful, noneffortful, or the result of differences in amount of processing, various factors other than existing attitudes could be responsible for observed differences in post-attack attitudes.

Alternatively, one could ask "FCM" questions. For example, a resistance outcome could occur because the message recipient engaged in correction for some "undue" positive influence (e.g., an illegitimate source posing as an expert). Related questions would include whether the communication setting or message includes factors that make awareness of bias likely (e.g., a salient bias, personal or situational reminders of potential bias, accessible theories of bias).
The Importance of Studying Process

For both theory development and for applications, one might reasonably ask about the importance of identifying the specific processes that bring about the resistance outcome. For both the ELM and FCM, a large part of the utility of identifying processes would lie in the different consequences that are hypothesized to follow from the thoughtful versus nonthoughtful mechanisms. Attitudes based on higher levels of elaboration have been found to persist longer over time (e.g., Haugtvedt & Petty, 1992; Petty, Haugtvedt, et al., 1995, described in Petty, Haugtvedt, & Smith, 1995), to guide related judgments and behavior more strongly (e.g., Cacioppo et al., 1986; Petty et al., 1983), and to resist future attempts at change better (e.g., Petty, Haugtvedt, et al., 1995; Haugtvedt & Petty, 1992) than attitudes based on lower levels of elaboration. Furthermore, these effects are hypothesized to occur regardless of whether the thoughtful processes consist of seeking a reasonable attitude or of avoiding potential bias (see Wegener & Petty, 1997; Wegener et al., 2001). Therefore, in addition to dissociating outcome from process (i.e., acknowledging that the same persuasion or resistance outcome can occur for different reasons), the ELM and FCM emphasize the different consequences of holding attitudes that result from effortful versus noneffortful processing.

As noted earlier, the discovery of different processes can also put one in a much stronger position to predict when the outcome will or will not occur, and to produce conditions under which the outcome would change. For example, if a resistance outcome can be attributed to corrections for a salient positive “bias” (e.g., an attractive or seemingly expert source, cf., Sagarin et al., 2002), then factors that reduce the salience of bias should influence the outcome. Alternatively, if the setting is one in which the issue of bias is chronically salient (e.g., because people are told by the law or common culture to avoid bias, as in areas of discrimination in job hiring, or because the person has a great deal of practice dealing with a particular bias, Wegener & Petty, 1997), one might imagine explicitly alerting message recipients to possible opposing (negative) biases that would offset the resistance-producing corrections.

Emphases on process and consequences can be applied to both techniques that increase and those that decrease resistance. For example, one could ask whether acknowledgment of resistance (as done by Linn & Knowles, 2002) decreases resistance through relatively thoughtful means (e.g., by getting people to think about the strong reasons that might lead a person to maintain his or her opinion despite clear knowledge that the audience for the message will be negatively disposed toward the message) or through relatively nonthoughtful means (e.g., simply finding the source more likeable when message recipients’ opinions are acknowledged). Of course, consistent with our ELM/FCM approach, acknowledgment of diverging opinions might sometimes reduce resistance through thoughtful means and, at other times, through nonthoughtful means. Importantly, however, distinguishing when the effects are thoughtful and when they are not would afford one much greater leverage in predicting
when the effects of "undermining resistance" are likely to hold up over time and when they are not.

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NOTES

1. Previous research had shown that people high in NC tend to process attitude-relevant information more thoroughly than people low in NC when the situation does not constrain processing to be high or low (e.g., Cacioppo, Petty, & Morris, 1983).

2. More recently, Fabrigar, Carter, Wegener, and Shestowsky (2002) have found that this tendency for the views of high-NC people to drive group decisions is actually stronger in four person groups than in dyads. This result is consistent with the idea that larger groups provide greater opportunity for social loafing (Latané, Williams, & Harkins, 1979) by low-NC people who would prefer to engage less in the cognitively demanding task of group discussion (cf., Petty, Cacioppo, & Kasmer, 1985, as described by Cacioppo, Petty, Kao, & Rodriguez, 1986). The relative lack of strength of attitudes for people low in NC might also decrease motivation to share and/or defend the opinion when larger numbers of others are apparently willing to do so.

3. Also, the motive to maintain one's current attitude (i.e., the motive to resist) can have many different sources.

4. Of course, messages can sometimes result in movement away from the message, referred to as "boomerang" (e.g., Abelson & Miller, 1967).

5. Though beyond the scope of the current chapter, our analysis of resistance outcomes would also suggest that one might usefully study thoughtful versus nonthoughtful processes that result in boomerang. For example, some relatively simple processes such as source derogation might bring about boomerang when a source insults a message recipient (e.g., Abelson & Miller, 1967), but boomerang could also occur because of thorough counterarguing of a weak attempt to persuade (e.g., Petty, Haugtvedt, et al., 1995, described in Petty, Haugtvedt, & Smith, 1995). Boomerang could also result from "over-corrections" for perceived positive influences. Of course, consistent with the discussions to follow, the same variable (e.g., an insult, Abelson & Miller, 1967) could lead to relatively thoughtful boomerang in some settings and relatively thoughtless boomerang in others.

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