Opening the Mind to Close It: Considering a Message in Light of Important Values Increases Message Processing and Later Resistance to Change

Kevin L. Blankenship  
California State University, Fresno

Duane T. Wegener  
Purdue University

Past research showed that considering a persuasive message in light of important rather than unimportant values creates attitudes that resist later attack. The traditional explanation is that the attitudes come to express the value or that a cognitive link between the value and attitude enhances resistance. However, the current research showed that another explanation is plausible. Similar to other sources of involvement, considering important rather than unimportant values increases processing of the message considered in light of those values. This occurs when the values are identified as normatively high or low in importance and when the perceived importance differs across participants for the same values. The increase in processing creates resistance to later attacks, and unlike past research, individual-level measures of initial amount of processing mediate value importance effects on later resistance to change. Important values motivate processing because they increase personal involvement with the issue, rather than creating attitudes that represent or express core values.

Keywords: values, information processing, resistance to persuasion

Attitude theorists have long been interested in attitude strength, a property of attitudes that has important implications for how attitudes influence people’s reactions to the world around them (Petty & Krosnick, 1995). Strong attitudes are those that have lasting impact. That is, strong attitudes last over time, resist change when attacked, and influence future thinking and behavior (Krosnick & Petty, 1995). Thus, practitioners in many domains have as their goal to create strong attitudes that support their products, policies, candidates, or other advocated actions.

One well-worn path to a strong attitude is to associate the attitude with important values. Values are generally described as a relative ordering of beliefs that serve as trans-situational guides for evaluative and behavioral concerns (Schwartz & Bilsky, 1987, 1990; see Rohan, 2000, for a review). Rokeach (1968, 1973) suggested that an attitude’s association with one’s values is an important consideration in attitude strength and structure. After all, values have been characterized as a “dominating force in one’s life” (Allport, 1961, p. 543), and values themselves have been shown to influence one’s perceptions of reality and to guide both attitudes and behaviors (Kraus, 1995; Thomsen, Lavine, & Kou-nios, 1996; Woodruff & Divesta, 1948). As such, connecting an attitude to an important value has been one common way to create strong attitudes.

Consistent with the proposed attitude strength, both attitudes and beliefs linked to values tend to be relatively resistant to various attempts at change. Behavioral resistance to social pressure has also been bolstered by the behavior’s relation to values. For example, social perceivers resist conforming to the behavior of others when the behavior conflicts with the social perceivers’ values (Schwartz, 1992; Vaughn & Mangan, 1963). As one would expect, effects of values are enhanced when the values are considered personally important rather than unimportant. For example, Lydon and Zanna (1990) found that research participants were more committed to a task involving their relationship partner when the task was described as being linked to their important rather than unimportant values. In addition, beliefs that have been anchored to a value by writing about the belief–value link more effectively resist a later message that attacks the belief, compared with situations in which the belief has not been anchored to the value (Nelson, 1968). In the attitudes domain, Ostrom and Brock (1969) manipulated whether the content of a persuasive message was linked to relatively important or unimportant values. They had research participants look for and draw links between either important or unimportant values and specific words or phrases in a persuasive message. When the values were important rather than unimportant, the resulting attitudes were more resistant to later attacks on those attitudes (see also Johnson & Eagly, 1989; Rokeach, 1968).
The most common explanation for such effects involves a cognitive link between the attitude and the value. For example, Ostrom and Brock (1968, 1969) put forth a cognitive model of attitudinal involvement in which key elements concern the centrality or importance of the value at stake and the relatedness of the value to the attitude. These two elements were believed to combine multiplicatively, such that high importance and high relatedness would result in the greatest attitudinal involvement. Highly involved attitudes were described as being “well imbedded in the cognitive structure, linked firmly and often with highly central elements” (Ostrom & Brock, 1968, p. 375). Like Sherif and Cantril (1947) before them, Ostrom and Brock (1968) expected high levels of attitudinal involvement to primarily result in high levels of resistance to persuasion. Because of the links connecting the attitude and value, change in the attitude would push toward further cognitive restructuring, and in the tradition of other cognitive consistency theories, the preference for stability and consistency would push the individual to resist change (see also Eagly & Chaiken, 1993, 1998; Sherif & Hovland, 1961). This ego-involvement/cognitive structure/cognitive consistency approach also formed the basis for Johnson and Eagly’s (1989) concept of value-relevant involvement.

Other related traditions in the attitude change domain are also consistent with these views. For example, functional theories of attitudes emphasize the psychological needs met by attitudes. One common attitude function is expression of one’s values (Katz, 1960; Kristiansen & Zanna, 1988; Maio & Olson, 2000). If an attitude is perceived as expressing a value that is central to one’s self-concept, it makes sense that the person would be reluctant to change that attitude (Nelson, 1968; Ostrom & Brock, 1969). In fact, Murray, Haddock, and Zanna (1996) characterized the Ostrom and Brock (1969) value-linking procedure as a creation of value-expressive attitudes and incorporated a linking procedure into their own manipulation of value-expressive attitudes. Also, Maio and Olson (1995) directly connected value expression with value-relevant involvement (Johnson & Eagly, 1989), which was based in the discussions of involvement by Sherif and Cantril (1947) and Ostrom and Brock (1968).

It seems to us, however, that connecting an attitude to a value (even one with extensive cognitive structure) is not the only reasonable explanation for resistance stemming from consideration of values. For example, the concept of involvement can be treated in a somewhat broader fashion. Petty and Cacioppo (1979, 1986, 1990) defined issue involvement in terms of how important the attitudinal issue is to the person (see also Apsler & Sears, 1968; Kiesler, Collins, & Miller, 1969). An issue can be perceived as important for many reasons. The issue could relate to virtually anything for which the person cares (the person’s outcomes, values, goals, friends, relatives, possessions, etc.). Thus, the same factors previously discussed as making the attitude itself involving (e.g., the attitude being self-defining, Sherif & Cantril, 1947, or being related to important values, Ostrom & Brock, 1969) would also make the message topic involving. In this broader conception of involvement, however, higher levels of issue involvement are thought to increase information processing, not simply to result in resistance to change (Petty & Cacioppo, 1979, 1990). This increase in processing should occur regardless of the source of issue involvement (Petty & Cacioppo, 1986, 1990; see also Boninger, Krosnick, & Berent, 1995). Therefore, intense information processing may provide an indirect route through which values could influence attitude strength in general and resistance to change in particular. That is, attitudes based on high rather than low levels of information processing (elaboration) are more likely to last over time, to resist change, and to guide future thinking and behavior (Petty, Haughtvedt, & Smith, 1995; Petty & Krosnick, 1995; Wegener, Petty, Smoak, & Fabrigar, 2004). Thus, if consideration of important values increases processing, it should be possible to produce strong, resistant attitudes even if the processing does not produce the kinds of direct connections between the value and the attitude that have guided most previous discussions of value effects on resistance or attitude strength. That is, resistance might occur even if attitudes do not become value expressive or are not viewed as representing one’s core values. It is this new, indirect route from values to resistance that we examined in the current research.

The idea that extensive cognitive structure underlying central or important values can impute strength to other cognitive structures (including attitudes) that are connected to the value may certainly still have merit. However, it also seems quite plausible that consideration of important values might get people to think extensively, and existing evidence suggests that high levels of thinking alone can create strong attitudes (without explicitly connecting the attitude to a previously existing value or making that attitude express the value). In fact, some of the original manipulations used to directly connect values and attitudes might also have prompted research participants to elaborate on (to think carefully about) the issue. For example, anchoring beliefs to a value created the most resistance when people actively participated in the anchoring (writing about the belief–value link) rather than anchoring in a more passive manner (Nelson, 1968). Thus, elaboration may have been an important part of the effectiveness of value anchoring in creating strong beliefs.

An elaboration component also seems plausible in accounting for the Ostrom and Brock (1969) attitude resistance effects. Although they discussed involvement as resulting from direct cognitive links between values and attitudes per se, they randomly assigned various values to be linked to passages from the persuasive message. Thus, the messages were not at all framed as the attitude supporting, expressing, or even relying on the specific value under consideration, and attitudes may not have been viewed as representing or expressing the values at all. Unfortunately, neither the Nelson (1968) nor the Ostrom and Brock research measured whether attitudes were perceived as representing or expressing the values. However, it seems quite possible that consideration of more important values would increase personal involvement with (and therefore effortful processing of) the associated message. If this occurs, it would provide an important alternative way of thinking about value effects on attitude strength (cf. Kiesler et al., 1969; Petty & Cacioppo, 1990).

1 Of course, much research on functional views has also emphasized that linking the counterattitudinal message itself to support for an important value can enhance the effectiveness of that persuasive message (e.g., DeBono, 1987; Murray et al., 1996).
Research Overview

Four sets of studies examined the potential role of message elaboration in creating later resistance to change when the original message was considered in light of important rather than unimportant values. In general, we propose that consideration of important values → issue involvement → message processing → attitude resistance. Considerable research suggests that involvement can influence message processing and that message processing can influence resistance (e.g., see Wegener et al., 2004). However, surprisingly little research has addressed whether consideration of important versus unimportant values can influence issue involvement or message processing, and neither issue involvement nor message processing has been the preferred explanation for how values create resistant attitudes. Thus, key pieces of the reported research address the links between value consideration and these hypothesized mediating mechanisms.

The first study set (i.e., Studies 1A and 1B) examined whether consideration of normatively important rather than unimportant values produces differences in the amount of elaboration of initial persuasive messages. In Study 1B, amount of elaboration was examined while also asking participants the extent to which their attitudes are based on their core values (i.e., questions used in past research to examine the value relevance of attitudes; e.g., Boninger et al., 1995; Holbrook, Berent, Krosnick, Visser, & Boninger, 2005). In both studies, we expected that consideration of important rather than unimportant values should increase elaboration of the message considered in light of the values. Especially if this occurs in the absence of attitudes coming to represent or express one’s core values (in Study 1B), this would suggest that initial message elaboration per se might be responsible for later resistance to change. A second study set (i.e., Studies 2A and 2B) controlled for the fact that considering normatively important versus unimportant values asks participants to consider different semantic content within the persuasive message. A third study set tied the elaboration effects back to the resistance outcome that was the focus of early work on value–attitude connections. Study 3 conceptually replicated past effects of value consideration on attitude resistance, and Study 4 examined the mediation of value effects on resistance by individuals’ level of elaboration. Finally, the fourth set of studies (i.e., Studies 5A and 5B) examined why consideration of important values increases amount of processing. These studies directly measured participants’ level of personal involvement with the issue to account for why consideration of important values increases message processing.

Studies 1A and 1B

The crucial mediator in our hypothesized path from values to resistance is amount of message processing. Message recipients might think more carefully about the content of a message if they expect that information to relate to values they hold as relatively important rather than unimportant (cf., Petty & Cacioppo, 1990). Our first two experiments addressed whether consideration of a message in relation to important rather than unimportant values influences the level of message processing. We expected that consideration of important values would lead to greater processing (elaboration) than consideration of unimportant values. To address this question, we adapted the paradigm used by Ostrom and Brock (1969; see also Murray et al., 1996) in which participants are randomly assigned to consider normatively important or unimportant values in relation to a persuasive message about a topic of low personal relevance to the message recipients. To index the level of processing of the persuasive message, we created two versions of the persuasive message, one that contained relatively strong (compelling) arguments and one that contained relatively weak (spurious) arguments. When processing is high rather than low, there should be larger effects of argument quality on attitudes and on the favorability of thoughts toward the attitude object (see Petty & Cacioppo, 1986).

Method

Participants and Design

One hundred forty-four introductory psychology students participated in Study 1A, and 79 participated in Study 1B. Students were randomly assigned to conditions of a 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) between-participants design.

Procedure

Participants were asked to relate values to a message, reported attitudes on the topic, and listed the thoughts that came to mind while reading the message. First, participants received a booklet presenting a written message containing either strong or weak arguments arguing that a fictitious country, Tashkentistan, should be allowed to join the European Union (EU). After viewing the message for the first time, participants were asked to engage in a “speech interpretation task.” Participants read three 3- to 4-sentence excerpts (paragraphs) from the message, each listed separately on a page along with an “idea” (i.e., a value). The value had been identified in pretests as normatively important or unimportant. Each message paragraph was created such that some elements were related to both the important and the unimportant values that were associated (in different conditions) with the excerpt. For each excerpt, participants were asked to circle the value and to circle a keyword in the excerpt that was most related to the value, connecting the two circled words by drawing a line between them. After the speech interpretation task, participants were asked to report their attitudes toward Tashkentistan entering the EU and to list the thoughts that came to mind when reading the message.

Two differences existed between Studies 1A and 1B. Participants in Study 1A (but not Study 1B) were asked to rate how appropriate the idea (value) was to the excerpt after drawing a link

---

2 In addition to adding the argument quality manipulation to the Ostrom and Brock (1969) paradigm, each message excerpt contained words that were semantically related to both an unimportant and an important value. Therefore, when participants looked for a word to circle in the speech interpretation task, they could find one in both conditions. Because Ostrom and Brock randomly assigned values to excerpts, there was no guarantee that there was any semantic content in the passage directly related to the value. Because of this, in elaboration terms, one could imagine that people might search harder (in vain) for material related to important rather than unimportant values. We wanted to avoid this possibility in the current research.
between each idea and a word in the excerpt (following Ostrom & Brock, 1969). This rating ensured that both important and unimportant values were perceived as having equal fit to their associated paragraphs. Also, after reporting their attitudes but before the thought listing, Study 1B participants were asked to report how closely their attitudes were related to their core, self-defining values (using items from a past measure of value-relevance of attitudes; Boninger et al., 1995; Holbrook et al., 2005).

**Independent Variables**

**Value importance.** In a pretest, three values (adopted from Schwartz, 1992) were identified as normatively important (i.e., self-respect, $M = 8.11$; loyalty, $M = 8.15$; and freedom, $M = 8.44$, on a 9-point scale with $1 = not$ at all important and $9 = very important$). Three other values were identified as normatively less important (i.e., wealth, $M = 5.41$; social power, $M = 5.70$; and unity, $M = 5.19$).

**Argument quality.** The message contained three arguments pretested to be either relatively cogent and compelling or relatively weak and specious in their support of Tashkentistan’s admittance into the EU (see Petty & Cacioppo, 1986, regarding pretesting procedures). One example strong argument described a strong Tashkentistani economy:

The economy has shown improvement in the past few years, and will continue to show even more if it becomes an EU participant. Unemployment has decreased and independence from government-assisted living has increased over the past few years, in part due to the construction of high-quality fishing ports that are capable of bringing in tons of fish per day.

The argument went on to say that this strong Tashkentistani economy would benefit the EU. In contrast, in the weak argument conditions, the Tashkentistani economy could only be viewed as benefiting from the EU, not the other way around:

Inclusion of a country into the EU leads to a chance at independence from outside influence, by providing security for the new country and changing its monetary system into the EU’s. EU members will aid in the building of new seaside ports, resulting in an extra hundred pounds of fish caught per week.

However, this EU support for Tashkentistan was also described as coming at a price to EU countries.

Within each argument, there were words that related to values pretested as important (i.e., self-respect) and unimportant (i.e., wealth). Yet the messages did not explicitly tie support for Tashkentistan would support self-respect or would support wealth. Therefore, the task of linking the value with a word from the message need not create attitudes viewed as expressing or representing the values.

**Dependent Variables**

**Appropriateness of values.** Study 1A participants were asked to rate how appropriate each value was for its message excerpt using a 9-point scale ($1 = not$ at all appropriate, $9 = very appropriate$).

**Attitudes.** Participants reported their attitude toward Tashkentistan becoming a member of the EU on five semantic 9-point differential scales ($1 = harmful, foolish, bad, unfavorable, and undesirable; 9 = beneficial, wise, good, favorable, and desirable$, respectively), as well as rating how strongly they agreed with the message ($1 = strongly disagree, 9 = strongly agree$; see Wegener & Fabrigar, 2004). The Cronbach’s alpha for these six items was .92 for Study 1A and .94 for Study 1B.

**Thought favorability.** After completing the attitude measures, participants completed a thought listing task. Participants were given 3 min to write down any thoughts they had while reading the message (see Wegener, Downing, Kronnick, & Petty, 1995, for specific instructions). Two judges, unaware of condition, categorized participants’ thoughts as positive, negative, or neutral toward admitting Tashkentistan to the EU. Thought favorability was computed by subtracting the number of negative thoughts from the number of positive thoughts and dividing by the total number of thoughts related to the topic. Thought favorability indices for the two judges were highly correlated (Study 1A, $r = .93$; Study 1B, $r = .89$), so they were averaged to form a single measure of thought favorability.

**Value relevance.** In Study 1B, after the attitude measure but before the thought listing, participants were asked to report the extent to which their attitude was related to their core, personal values. Similar to Holbrook et al. (2005; see also Boninger et al., 1995), participants were asked the extent to which Tashkentistan entering the EU (a) is related to their personal values ($1 = not$ at all, $9 = very much; 1 = does not at all reflect, $9 = very much reflects$), (b) is based on the values they care about the most ($1 = not$ at all, $9 = very much; 1 = does not at all reflect, $9 = very much reflects$), (c) has an impact on the values they care about the most ($1 = not$ at all, $9 = very much; 1 = does not at all reflect, $9 = very much reflects$), and (d) reflects their core values ($1 = not$ at all, $9 = very much; 1 = does not at all reflect, $9 = very much reflects$). The Cronbach’s alpha for the eight items was .95.

**Results**

**Appropriateness of Values**

In Study 1A, the rated appropriateness of the important and unimportant values was compared for each message excerpt. There were no differences for any of the excerpts (all $Fs < 1.00$; across all values and excerpts, $M_{imp} = 5.91$, $M_{unimp} = 6.01$). This suggests that differences in elaboration were not due to differences in the appropriateness of the value to the passage across the important and unimportant value conditions. These appropriateness measures were also included in Studies 2A–5B. Across all studies, the values were never rated as differentially appropriate (all $Fs < 1.10$).

**Attitudes**

We expected that the value importance manipulation would interact with argument quality such that the effect of argument quality would be larger when participants considered the message in light of important rather than unimportant values.

A $2$ (value: important vs. unimportant) $\times 2$ (argument quality: strong vs. weak) analysis of variance (ANOVA) revealed the
predicted Value × Argument Quality interaction for both Study 1A, $F(1, 140) = 6.04, p = .016$, and Study 1B, $F(1, 75) = 5.78, p = .02$ (see Table 1). That is, in both studies, the difference between the strong and weak argument conditions was greater in the important value conditions than in the unimportant value conditions. Study 1B also showed a main effect of argument quality, $F(1, 75) = 5.93, p = .019$, with strong arguments ($M = 7.11, SD = 1.49$) leading to more favorable attitudes than weak arguments ($M = 6.26, SD = 1.58$).^3 Across samples, the attitude results suggest that consideration of a message in light of important rather than unimportant values increased elaboration of the message. This suggests that differences in elaboration across value importance conditions might be a potential mechanism to account for differences in later resistance to change.

**Thought Favorability**

We expected the favorability of participants’ thoughts to parallel their attitudes. A 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) ANOVA revealed the predicted Value × Argument Quality interaction in Study 1A, $F(1, 140) = 6.72, p = .01$, and Study 1B, $F(1, 75) = 4.32, p = .04$ (see Table 1). In both studies, there was a greater difference between strong and weak arguments when values were important rather than unimportant. There was also a main effect of argument quality for Study 1A, $F(1, 140) = 4.14, p < .044$, and Study 1B, $F(1, 75) = 3.95, p = .049$, with participants reporting more favorable thoughts when arguments were strong rather than weak.

**Value Relevance**

For Study 1B, a 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) ANOVA on the value relevance measure revealed no significant effects ($F$s < .65). Most importantly, consideration of important values did not increase the extent to which attitudes were viewed as representing core values ($M = 4.34, SD = 2.09$) relative to consideration of unimportant values ($M = 4.69, SD = 1.77$). This suggests that perceptions of value relevance were not influenced by the value importance manipulation. In other words, the current paradigm does not create attitudes that are value expressive or viewed as directly reflecting the values (cf. Holbrook et al., 2005; Johnson & Eagly, 1989; Maio & Olson, 1995; Murray et al., 1996; Ostrom & Brock, 1969). In addition, the measure of value relevance neither moderated the effect of argument quality on attitudes ($p > .28$) nor predicted attitudes directly ($p > .83$). In recent research, we have replicated the message processing effects of value consideration while also failing to find any differences in rated value relevance of the resulting attitudes (Blankenship & Wegener, 2007). Thus, we can be confident that the current paradigm need not create attitudes perceived as reflecting or expressing the values.

**Mediational Analyses**

As noted by Petty and Cacioppo (1986), an argument quality manipulation is intended as an experimental manipulation of participants’ cognitive responses to the persuasive message. Therefore, for Studies 1A and 1B, we expected measures of thought favorability to mediate argument quality effects. In other words, Value × Argument Quality effects would really be due to differences in thought favorability produced when people encounter the strong or weak arguments while considering important rather than unimportant values. This produces a form of mediated moderation (Muller, Judd, & Yzerbyt, 2005; Wegener & Fabrigar, 2000) in which the Value × Thought Favorability effect is responsible for the Value × Argument Quality effects on attitudes.

The Value × Argument Quality effect on thought favorability represents moderation of the front-end effects of argument quality on thoughts. This effect is consistent with value importance influencing the amount of elaboration of the message arguments. Differences in thought favorability would then carry the impact of argument quality through to attitudes. Traditionally, these types of effects have been indexed, in part, by showing that correlations between thoughts and attitudes are stronger when elaboration is high rather than low (see Petty & Cacioppo, 1986; Wegener et al., 1995). In the current analyses, this type of differential relation between thoughts and attitudes would result in back-end moderation of thought favorability effects on attitudes. Therefore, the combination of front-end moderation (of argument quality effects on thoughts) and back-end moderation (of thought effects on attitudes) provides a strong case for value importance affecting the level of elaboration. In statistical terms, this pattern of effects is present if the Value × Thought term continues to predict attitudes above and beyond the Value × Argument Quality term when predicting attitudes (along with the Value × Argument Quality effect on thoughts that has already been reported).

---

Table 1

**Means, Standard Deviations, and Simple Effects for Attitudes and Thoughts as a Function of Value Importance and Argument Quality in Studies 1A and 1B**

<table>
<thead>
<tr>
<th>Study</th>
<th>Values</th>
<th>Argument Quality</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Strong</td>
<td>Weak</td>
<td>$t$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.97 (1.24)</td>
<td>6.07 (1.64)</td>
<td>2.64*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Important</td>
<td>5.96 (1.38)</td>
<td>6.29 (1.69)</td>
<td>-0.89</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.41 (0.56)</td>
<td>-0.10 (0.74)</td>
<td>3.29*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unimportant</td>
<td>-0.03 (0.65)</td>
<td>0.03 (0.65)</td>
<td>0.39</td>
<td></td>
</tr>
<tr>
<td>1B</td>
<td></td>
<td>7.54 (1.30)</td>
<td>5.79 (1.49)</td>
<td>3.75*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Important</td>
<td>6.74 (1.57)</td>
<td>6.75 (1.65)</td>
<td>-0.20</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>0.21 (0.56)</td>
<td>-0.29 (0.74)</td>
<td>2.90*</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Unimportant</td>
<td>-0.02 (0.56)</td>
<td>-0.01 (0.55)</td>
<td>0.07</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* Standard deviations are in parentheses.

$p < .05$.

---

^3 Study 1A also included control conditions ($n = 71$) in which participants were asked to simply reread the strong or weak message excerpts instead of considering the paragraph in light of any of the values. Like the unimportant value conditions, there was no effect of argument quality on participants’ attitudes ($F < 1.00$) or thoughts ($F < 1.50$), suggesting that the topic was of low personal relevance, that the baseline amount of elaboration was low, and that the value consideration task per se was not increasing amount of processing (because there were no differences in effects of argument quality across the control and unimportant value conditions). The low level of baseline processing creates favorable conditions for testing variables thought to increase amount of processing (see Petty & Wegener, 1998).
To test these possibilities, we conducted the analyses outlined by Muller et al. (2005; see also Wegener & Fabrigar, 2000). The first regression analysis replicated the ANOVA results presented earlier. We centered all predictor variables prior to analysis (Aiken & West, 1991). As reported earlier, the Value \times Argument Quality interaction significantly predicted participants’ attitudes, Study 1A, \(b = 0.31, t(140) = 2.46, p = .015\); Study 1B, \(b = 0.41, t(75) = 2.40, p = .019\). The next analysis examined effects of the predictor variables on the mediator. As presented earlier, we obtained a significant Value \times Argument Quality interaction on thought favorability, Study 1A, \(b = 0.43, t(140) = 4.02, p < .001\); Study 1B, \(b = 0.13, t(75) = 2.88, p < .001\). Similar to past analyses of differential thought–attitude correlations (see Petty & Cacioppo, 1986), when values, thoughts, and the Value \times Thought interaction were used to predict attitudes, the Value \times Thought Favorability interaction on attitudes was significant, Study 1A, \(b = 0.52, t(139) = 2.79, p = .006\); Study 1B, \(b = 0.92, t(74) = 3.14, p = .002\). The final analysis included effects of all of the distal predictors on the dependent measure (as reported in the previous regression effects on the attitude measure) plus the main effect and interactions involving the mediator (thoughts). In this analysis, the Value \times Thought Favorability interaction remained strong and significant, Study 1A, \(b = 0.47, t(139) = 2.44, p = .016\); Study 1B, \(b = 0.65, t(74) = 2.19, p = .03\), whereas the distal Value \times Argument Quality interaction on attitudes was reduced to nonsignificance, Study 1A, \(b = 0.14, t(139) = 1.40, p = .18\); Study 1B, \(b = 0.25, t(74) = 1.46, p = .15\). As described by Muller et al. (2005) and Wegener and Fabrigar (2000), the combination of the two significant paths (moderation on the front-end influences on the mediator and moderation on the back-end influences of the mediator on the dependent measure) support the mediated moderation pattern.4

Discussion

Taken together, the results suggest that consideration of important rather than unimportant values increased message processing. This occurred even though the resulting attitudes were not viewed as expressions of the values or as reflections of the participants’ core beliefs. These types of perceptions of value–attitude relations (or direct cognitive connections between the values and attitudes) formed the heart of previous discussions of value effects on later resistance to change (e.g., Holbrook et al., 2005; Maio & Olson, 1995; Ostrom & Brock, 1969; Sherif & Cantril, 1947). Yet past research did not provide direct evidence of value expression, perceptions of value relevance, or direct cognitive connections per se mediating value effects on resistance. Thus, if elaboration of the initial message mediates value effects on resistance, this would be the first direct evidence for a mechanism by which consideration of important values creates later resistance to change. Evidence that consideration of important rather than unimportant values increases message processing constitutes an important first step in arguing for the plausibility of our proposed indirect route from value importance to resistance (through changes in issue involvement and, therefore, message processing).

Before examining these mediational roles, however, we thought it prudent to address a primary concern about the first two studies. Different values were used across the value importance conditions. Because participants were looking for different semantic content in the message paragraphs, one might wonder whether those semantic differences per se created the differences in amount of processing. That is, if some semantic content is easier to find and other content is harder to find, it could be that these semantic differences happen to be associated with value importance, rather than importance per se producing differences in processing. This seems unlikely, given the use of multiple values and passages across conditions, but the possibility cannot be ruled out on the basis of the first two studies.

Studies 2A and 2B

The key to addressing semantic differences across values is to design a study that uses the same values across levels of value importance. In Studies 2A and 2B, we used the same values for everyone but measured differences across participants in their self-rated value importance. If differences in elaboration are created by differences in value importance per se, then the perceptions of importance should predict processing differences. If, however, the ease of finding certain semantic content within the messages is responsible for the previous effects, then the current studies would produce no differences in processing across levels of perceived value importance (because the semantics are the same for everyone). This design would also control for other possible differences across the specific values used, such as priming of concepts related to motivation, processing, or resistance. We expected that perceptions of value importance would moderate effects of the argument quality manipulation on thoughts and attitudes, similar to Studies 1A and 1B.

Method

Participants and Design

Forty-four introductory psychology students participated in Study 2A, and 82 participated in Study 2B. Participants were randomly assigned to receive the same strong or weak arguments used in Studies 1A and 1B. Before reading the message, students in both studies completed measures of the importance of the values considered later in relation to the message.

Procedure

Procedures were the same as in Studies 1A and 1B with the following exceptions. Prior to receipt of the message, participants were asked to rate how important six ideas (i.e., values) were to them. The values considered in relation to the message (i.e., wealth, social power, and unity) were three of the six ideas rated. These values were used because pretests showed their mean importance ratings were near the midpoint of the scale, and they displayed a reasonable amount of variability across people. For each participant, the mean rating of importance across the three

4 An alternative is to test the mediation of the argument quality effect on attitudes through thoughts at each level of value importance. In the important value conditions, argument quality did not predict participants’ attitudes or thoughts. Also, thoughts failed to reliably predict attitudes. Thus, no mediational pattern is plausible for unimportant value conditions. In the important value conditions, however, Sobel tests for the expected mediational pattern were significant (Study 1A, \(z = 2.45, p = .023\); Study 1B, \(z = 2.21, p = .014\); see Baron & Kenny, 1986).
values was used as the index of value importance. For Study 2A, there was no thought listing after the attitude measures, but Study 2B included both the attitude measures and the thought listing.

Results

Attitudes

In Study 2A, the Cronbach’s alpha for the six attitude items was .92. In Study 2B, it was .89. In both studies, we used a simultaneous regression with the argument quality manipulation, the value importance measure (centered), and their interaction predicting participants’ attitudes. The predicted Argument Quality \( \times \) Importance interaction was significant for Study 2A, \( b = 1.00, t(43) = 4.74, p < .001 \), and Study 2B, \( b = 0.46, t(78) = 3.01, p < .005 \) (see Table 2). At one standard deviation below the mean of value importance, there was no significant effect of argument quality on attitudes. In contrast, at one standard deviation above the mean of value importance, there was a significant effect of argument quality on attitudes. When the value was rated as relatively important, participants’ amount of elaboration was increased. There were also argument quality effects on attitudes in Study 2A, \( b = 0.76, t(43) = 4.23, p < .001 \), and Study 2B, \( b = 0.43, t(78) = 2.86, p = .006 \). Finally, in Study 2A, rated value importance also influenced attitudes, \( b = 0.61, t(43) = 4.27, p < .001 \).

Thought Favorability

In Study 2B, the favorability of thoughts was coded in the same manner as in Studies 1A and 1B by one of the same coders (unaware of argument quality condition or value importance ratings). A simultaneous regression with the argument quality manipulation, the value importance measure (centered), and their interaction predicting participants’ thoughts revealed the predicted Argument Quality \( \times \) Value Importance interaction, \( b = 0.23, t(76) = 3.83, p < .001 \) (see Table 2). At one standard deviation below the mean of value importance, there was no significant effect of argument quality on thoughts. In contrast, at one standard deviation above the mean of value importance, there was a significant effect of argument quality on thought favorability. These results replicate the results of Studies 1A and 1B and provide additional evidence for the role of elaboration in value importance.

Table 2

<table>
<thead>
<tr>
<th>Study</th>
<th>Value importance</th>
<th>Argument quality</th>
<th>Strong</th>
<th>Weak</th>
<th>( t )</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>( 1 \ SD = 6.70 )</td>
<td>6.98</td>
<td>5.75</td>
<td></td>
<td>2.45*</td>
</tr>
<tr>
<td></td>
<td>( -1 \ SD = 4.50 )</td>
<td>6.46</td>
<td>6.56</td>
<td></td>
<td>-0.21</td>
</tr>
<tr>
<td>2B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>( 1 \ SD = 7.72 )</td>
<td>7.46</td>
<td>5.36</td>
<td></td>
<td>3.35*</td>
</tr>
<tr>
<td></td>
<td>( -1 \ SD = 5.02 )</td>
<td>6.75</td>
<td>6.80</td>
<td></td>
<td>-0.12</td>
</tr>
<tr>
<td>Thoughts</td>
<td>( 1 \ SD = 7.72 )</td>
<td>0.65</td>
<td>-0.17</td>
<td></td>
<td>4.77*</td>
</tr>
<tr>
<td></td>
<td>( -1 \ SD = 5.02 )</td>
<td>0.33</td>
<td>0.25</td>
<td></td>
<td>1.01</td>
</tr>
</tbody>
</table>

\* \( p < .05 \).
Study 3

The data presented thus far do not directly address value effects on resistance to change. Because the current paradigm differs in some ways from past studies of values and resistance, we thought it best to use the current paradigm to conceptually replicate previous value–resistance effects. Then, we could seek evidence that these effects are mediated by the differences in elaboration demonstrated in the previous studies. Thus, Study 3 was intended to conceptually replicate the resistance results from Ostrom and Brock (1969) using the current procedures.

An ideal test of elaboration effects on resistance requires that initial attitudes differ in the level of elaboration that went into establishing the attitudes without differing in other ways that would confound the comparison (Petty et al., 1995). Chief among these possible confounds would be differences in extremity of the initial attitudes. For example, if high-elaboration attitudes were more resistant to change but also started out being less extreme than initial low-elaboration attitudes, critics might reasonably note that the resistance result might have occurred because the high-elaboration attitudes were less discrepant from the attacking message (i.e., they had less possible room for change). Alternatively, if initial high-elaboration attitudes were more extreme than initial low-elaboration attitudes, increased resistance of high-elaboration attitudes might be attributed to the greater extremity per se (another common antecedent of attitude strength; Abelson, 1995).

To create initial attitudes of equal extremity, we adjusted the persuasive communications used in the previous studies. We added positive information about the source of the initial message. In our earlier studies, no information had been given about the writer of the message. However, in the current study, the initial message was attributed to a highly expert source. This information on source expertise should especially increase the favorability of initial attitudes in the low-processing (i.e., unimportant value) conditions (see Chaiken & Maheswaran, 1994; Petty, Cacioppo, & Goldman, 1981). By increasing the favorability of attitudes when the message is considered in light of unimportant values, the extremity of attitudes may be equal across important and unimportant values when the arguments in the initial message are strong.

Thus, for Study 3, all participants received the same strong arguments as in the previous studies. After creating equally extreme initial attitudes across levels of value importance, we exposed participants to a counterattitudinal message arguing against admittance of Tashkentistan to the EU. We expected that conditions leading to higher levels of processing in the preceding studies (i.e., high value importance) would create greater resistance to the second, attacking message. This would result in an interaction between the importance of the value considered during the initial message and the time of attitude measurement. There should be no difference in initial attitudes, but after the second message (arguing against admission of Tashkentistan), there should be less favorable attitudes toward admitting Tashkentistan to the EU when values had been unimportant rather than important.

Method

Participants and Design

One hundred five introductory psychology students were randomly assigned to consider either important or unimportant values in a 2 (value: important vs. unimportant) × 2 (time: initial vs. postattack) mixed design with value as a between-participants factor and time as a within-participants factor.

Procedure

As in the previous studies, participants read a message supporting the admittance of Tashkentistan to the EU. As noted earlier, participants were given information about the writer of the message that had not been provided in the earlier studies. When encountering the first message, participants learned that Dr. Endelshone, a professor in the Finance Department at the University of Zurich and cochair of the committee examining Tashkentistan’s application for admittance to the EU, approved of Tashkentistan’s admittance. This information provided a positive cue that could increase favorability of attitudes in the unimportant value conditions, thereby equating the favorability of initial attitudes across value conditions. After reading the brief description of the message source, participants completed the same speech interpretation task linking each value to specific words in the strong argument message from the previous studies. Participants were then asked to report their attitudes using the same set of items listed earlier (Cronbach’s α = .82). Consistent with previous resistance studies, thoughts about the initial message were not collected, so the level of elaboration was not artificially increased in conditions where low levels of thinking would have been the natural result (i.e., unimportant value conditions; see Petty et al., 1995, for discussion).

After reporting their initial attitudes toward the proposal, participants read an attacking message written by the other cochair of the committee (Dr. Dijksterhuis), who was said to believe that Tashkentistan should not be admitted into the EU. This attacking message consisted of relatively weak arguments that countered the strong arguments used in the initial message. For example, regarding the economy of Tashkentistan, Dr. Dijksterhuis claimed,

Initial estimates used to show improvement in the unemployment rate were based on incomplete information. For example, only 189 of the 192 major businesses in Tashkentistan had reported their employment statistics, leaving three businesses unaccounted for. These three major businesses might be laying off workers, which could change the unemployment rate by as much as a half percentage point overall.

After the attacking message, participants reported their attitudes using the same six items as for initial attitudes (Cronbach’s α = .92) and were asked to list thoughts that came to mind while reading the attacking message. Finally, participants were debriefed and dismissed.

Results

Attitudes

There should be no differences in participants’ initial attitudes across the value importance conditions, but participants’ attitudes in the important value conditions should better resist the attacking message than attitudes in the unimportant value conditions. Thus, we expected a Value × Time interaction on attitudes. A 2 (value: important vs. unimportant) × 2 (time: initial vs. postattack) mixed-design ANOVA revealed the predicted Value × Time interaction, $F(1, 103) = 10.42, p = .002$. There was no difference in partici-
pants’ initial attitudes across the value importance conditions (unimportant \( M = 6.73, SD = 1.05 \), vs. important \( M = 6.61, SD = 1.23 \)), \( t(103) = .32, p = .58 \). Yet, after the attacking message, attitudes were less favorable in the unimportant \( (M = 5.23, SD = 1.63) \) rather than important \( (M = 6.03, SD = 1.05) \) value conditions, \( t(103) = 7.23, p = .008 \). These results replicate the results found by Ostrom and Brock (1969), providing a necessary step in exploring the possible mediational role of elaboration in value bonding effects on resistance. There was also an effect of time, \( F(1, 103) = 52.14, p < .001 \), with participants’ attitudes more favorable initially \( (M = 6.67, SD = 1.14) \) than they were after reading the attacking message \( (M = 5.60, SD = 1.57) \).

**Thoughts During the Attacking Message**

After the postattack attitude measure, participants were asked to write down any thoughts they had while reading the second, attacking message. Thoughts were coded as positive when they supported Tashkentistan joining the EU and negative when they opposed Tashkentistan joining the EU. As in the previous studies, an index of thought favorability was created by taking the number of thoughts favorable toward Tashkentistan joining the EU, subtracting the number of thoughts unfavorable toward Tashkentistan joining the EU, and dividing by the total number of thoughts. A one-way ANOVA revealed an effect of value, \( F(1, 103) = 6.88, p = .011 \), with participants who initially considered important values reporting more positive thoughts toward Tashkentistan joining the EU \( (M = 0.65, SD = 0.61) \) than in the unimportant value conditions \( (M = 0.30, SD = 0.73) \). The thought measure partially mediated the effects of value on resistance \( (Sobel z = -2.09, p = .037) \), suggesting that the resistance in Study 3 was an active type of resistance in which participants defended their initial point of view in relatively thoughtful ways (for discussion of thoughtful and nonthoughtful forms of resistance, see Wegener et al., 2004).

**Discussion**

Study 3 presented an attacking message and replicated the resistance effects of Ostrom and Brock (1969) using the current materials and procedure. Thus, the same manipulation of value importance that created differences in message processing in Studies 1A and 1B also created differences in resistance of the attitudes to attack in Study 3. Thus, consistent with our issue-implication-based approach, the results thus far suggest that the observed differences in message processing might be responsible for the observed differences in attitude resistance. These cross-study comparisons provide evidence that is typical of past studies of elaboration and attitude strength. That is, a manipulation or measure hypothesized to enhance elaboration (e.g., manipulations of personal relevance of the message topic, Petty et al., 1981, or of distraction, Petty, Wells, & Brock, 1976, or a measure of need for cognition, Cacioppo, Petty, & Morris, 1983) is shown to do so. Then, the same manipulation or measure is used to create initial attitudes of equal extremity that are influenced differently by an attacking message (e.g., Haugtvedt & Petty, 1992; Petty et al., 1995; see also Haugtvedt & Wegener, 1994; Wegener et al., 2004). Although the evidence is suggestive of elaboration effects on resistance, individuals’ level of elaboration has not been assessed or used as a mediator of distal variable effects on resistance. Study 4 was designed to produce direct mediational evidence of elaboration as a mediator of value importance effects on attitude resistance.

**Study 4**

Elaboration has been hypothesized to mediate effects of many motivation and ability variables on attitude strength outcomes (Petty & Cacioppo, 1986; Petty et al., 1995; Wegener et al., 2004). Yet, in these past studies, the role of elaboration has been implied through comparisons across participants and across studies, rather than being analyzed as a within-participants measure or mediator. This may be true, in part, because the most popular indicators of amount of processing (e.g., thought-attitude correlations, argument quality effects on attitudes) are generally created as between-participants indices (see Wegener et al., 1995). To provide more direct evidence of elaboration mediating value importance effects on resistance, we used a within-participant measure of elaboration based on a within-participant manipulation of argument quality (cf. Erb, Bohnenk, Rank, & Einwiller, 2002; Erb, Bohnenk, Schalzle, & Rank, 1998).

In making a case for the mediational role of elaboration per se, one might also want to control for beliefs about one’s level of elaboration. For example, one could imagine some cases in which the mere belief that one has thought a lot rather than a little could get people to hang onto the attitude that was based on much rather than little thought. Although these effects of elaboration would be of scientific interest, similar effects could occur without any differences in actual elaboration, as long as people could be convinced that they thought much rather than little (e.g., Barden, 2006). A similar situation has recently been studied regarding the confidence people have in their attitudes. That is, higher levels of elaboration can increase confidence (Chaiken, Liberman, & Eagly, 1989), and higher levels of confidence can increase resistance to later attacking messages (Bassili, 1996; Tormala & Petty, 2002). Yet different levels of confidence can also be created without differences in elaboration by telling people that they successfully resisted strong versus weak arguments against their current position (e.g., Tormala & Petty, 2002). Therefore, in providing evidence of elaboration per se increasing resistance, it seemed prudent to measure and control for beliefs about the amount of processing in which one engaged, as well as the amount of confidence message recipients had in their attitudes prior to the attack.

**Method**

**Participants and Design**

One hundred forty-four introductory psychology students participated in a 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) × 2 (time: initial vs. postattack) × 2 (order of arguments: strong/weak/strong/weak vs. weak/strong/weak/strong) mixed design. Argument quality and time were within-participants factors, and value and order were between-participant factors.

**Procedure**

Study 4 combined the resistance procedure from Study 3 with aspects of the processing studies (i.e., an argument quality manip-
ulation in the initial message, but this time within-participants). Participants first received the same source from Study 3 presenting an initial message supporting Tashkentistan’s admittance to the EU. Participants engaged in the same speech interpretation task as in the previous studies. To create individual-level indices of elaboration, participants received a message containing two strong and two weak arguments. By later assessing judgments related to each of the arguments, we were able to index the level of elaboration for each individual.

During the speech interpretation task, two important or unimportant values were related to the message, each value being linked to one of the strong argument passages and to one of the weak argument passages. After considering the message in light of either important or unimportant values, participants evaluated the support for Tashkentistan joining the EU in each of the four arguments. After evaluating the arguments, participants were asked to report how confident they were in their evaluations and how much cognitive effort they exerted in reading the message.

The central data from these initial dependent measures should parallel the data from the previous amount-of-processing studies (Studies 1A–2B). That is, the dimensions associated with strong arguments should be evaluated more favorably than the dimensions associated with weak arguments, especially when participants considered important rather than unimportant values.

Similar to Study 3, after the initial dependent measures, participants read a second (attacking) message that opposed Tashkentistan’s admittance to the EU. The attacking message was attributed to the same source used with the attacking message in Study 3. As in Study 3, the attack was tailored to contain relatively weak arguments that countered the claims associated with strong support in the initial message. Because initial evaluations should be equated only for dimensions initially supported by strong arguments (as in Study 3), the attacking message and postattack independent measures addressed only those dimensions that were initially supported by strong arguments.

After reading the attacking message, participants evaluated the support for Tashkentistan entering the EU along the dimensions in the attacking message (i.e., the same dimensions supported by strong arguments in the initial message and then attacked by relatively weak arguments in the attacking message). Participants used the same evaluation measures as when they evaluated the same dimensions after the initial message. Finally, participants were debriefed and dismissed.

Independent Variables

Argument quality. Each participant received two strong, compelling arguments and two weak, spurious arguments in favor of Tashkentistan becoming a member of the EU. Each argument addressed a different dimension along which Tashkentistan’s admittance could be supported, and dimensions were always addressed in the same order (though order of the strength of arguments varied across participants). One strong argument and one weak argument were paired with each (important or unimportant) value. Each argument included two related facets that formed the basis for later evaluations. One argument addressed the family connections and worldwide alliances existing in Tashkentistan. A second argument addressed national pride and perceived similarity with EU countries. The third argument addressed strength of the Tashkentistani economy and financial independence of the country. The final argument addressed food safety and livestock quality.

For example, participants who received a strong argument about Tashkentistani standards for food safety/livestock quality learned the following:

Tashkentistan is at the forefront of food safety, by setting down strict guidelines about livestock quality (most of which meet or exceed international standards). . . . As a result, 97% of dairy and beef cattle farmers have passed international food safety regulations and reports of unhealthy and sick livestock have decreased to a low 2%.

Participants who received a weak food safety/livestock quality argument read that

Tashkentistan is near the top of food safety in some parts of the world, by setting down strict guidelines about livestock quality (most of which meet third world country standards). . . . As a result, 9% of dairy and beef cattle farmers have passed international food safety regulations and reports of unhealthy and sick livestock have decreased to 38%.

As noted earlier, participants considered one strong and one weak argument in light of each (important or unimportant) value during the speech interpretation task. The order of the strong and weak arguments was counterbalanced such that half of the participants received arguments in a strong/weak/strong/weak order, whereas the other half received arguments in a weak/strong/weak/strong order.

Value importance. Each participant used two of the important values or two of the unimportant values used in the previous studies, with each value considered with one of the strong initial arguments and with one of the weak initial arguments. Participants in the important (unimportant) value conditions were asked to consider loyalty (unity) when receiving arguments about Tashkentistan’s family connections/worldwide alliances and national pride/similarity to EU countries and were asked to consider freedom (wealth) when receiving arguments about Tashkentistan’s economy/financial independence and food safety/livestock quality.

Dependent Variables

Initial evaluations. After reading the initial message and engaging in the speech interpretation task, participants were asked to evaluate the support provided by each of the arguments. Participants rated each of the eight facets (two per argument) in terms of the extent to which it would be (a) useful and (b) advantageous for the EU to have a country with Tashkentistan’s qualities (i.e., worldwide alliances, tradition of family connections, feeling of a common bond with other EU countries, amount of national pride, economy, level of financial independence, food safety standards, and livestock quality, respectively). All ratings were made on a 9-point scale (1 = not at all useful/not at all advantageous, 9 = very useful/very advantageous). Correlations between the two items for each facet ranged between .70 and .82, and the four measures for each argument were averaged to form a composite measure for that argument. Cronbach’s alphas for each of the four arguments (combining the four items across the two facets for each argument) ranged from .81 to .91.
The initial argument evaluations were also used to create an index of amount of elaboration of the initial message. Recall that between-participant assessments of elaboration often use argument quality effects on attitudes as the indicator of the amount of elaboration. We computed a within-participant index of elaboration based on differences in evaluations across the dimensions that were supported by strong versus weak arguments. This differential-evaluation index was created by averaging the evaluations of strong argument dimensions and subtracting the average evaluation of weak argument dimensions.

Confidence. After rating all of the arguments, participants were asked to rate on two 9-point scales how confident and how certain they were about their beliefs regarding Tashkentistan becoming part of the EU (1 = not at all certain/not at all confident, 9 = very certain/very confident; Tormala & Petty, 2002). The correlation between the two items was .84, and the ratings were averaged to form a composite measure of confidence.

Self-reported amount of elaboration. Participants responded to three items designed to assess their own perceptions of their elaboration of the initial message (1 = no attention at all, 9 = a lot of attention), how much effort they put into reading the message (1 = no effort at all, 9 = a lot of effort), and how deeply they thought about the issue (1 = not deeply at all, 9 = very deeply). Cronbach’s alpha for the scale was .85, and the ratings were averaged to form a composite measure of self-reported amount of elaboration.

Postattack evaluations. After the attacking message, participants were asked to evaluate the support for Tashkentistan entering the EU on the same four facets (two per argument) that were addressed by the attacking message using the same measures as in the initial evaluations. Correlations between the two items for each facet ranged between .71 and .92, and the four measures for each argument (two per facet) were averaged to form a composite measure for that argument (Cronbach’s alphas for each argument, collapsing across the two facets in each argument, ranged from .88 to .92).

Results

Initial Evaluations

Consideration of important rather than unimportant values should create higher levels of elaboration. This should create larger differences between strong and weak argument dimensions when values are important rather than unimportant (a Value \times Argument Quality interaction). A 2 (value: important vs. unimportant) \times 2 (argument quality: strong vs. weak) mixed-design ANOVA revealed that the predicted Value \times Argument Quality interaction was significant, $F(1, 140) = 6.48, p < .001$. Argument quality influenced initial evaluations to a greater extent when the message was considered in light of important (strong $M = 6.55, SD = 1.38$, vs. weak $M = 6.11, SD = 1.29$), $t(69) = 2.50, p = .016$, rather than unimportant values (strong $M = 6.41, SD = 1.35$, vs. weak $M = 6.18, SD = 1.33$), $t(75) = 1.31, p = .19$. Thus, similar to previous studies, consideration of important values increased participants’ elaboration of the initial message. There was also an overall main effect of argument quality, $F(1, 140) = 5.65, p = .02$, with qualities of Tashkentistan supported by strong arguments being rated more favorably ($M = 6.48, SD = 1.36$) than qualities supported by weak arguments ($M = 6.15, SD = 1.31$). All results reported for the evaluations remain the same when the measures are standardized within each facet across levels of order instead of using raw ratings.

Participant Perceptions of Elaboration and Confidence

A 2 (value: important vs. unimportant) \times 2 (order of arguments: strong first vs. weak first) ANOVA yielded no significant effects on participants’ perceptions of elaboration ($Fs < 1.50$) or confidence in their evaluations ($Fs < 1.00$). Therefore, any effects of elaboration on resistance occur above and beyond differences in perceived amount of elaboration or in confidence. All of the mediational analyses revealed the same results when controlling for perceptions of effort or confidence.

Resistance to Change

Similar to Study 3, when dimensions initially supported by strong arguments are attacked, evaluations of the dimensions should be more resistant to change when the evaluations are based on high rather than low levels of elaboration (i.e., when considered values are important rather than unimportant). This would result in a Value \times Time interaction. Evaluations of the dimensions associated with strong arguments in the initial message were examined both initially and after the attacking message. We submitted evaluations to a 2 (value: unimportant vs. important) \times 2 (order: strong first vs. weak first) \times (time: initial vs. postattack) mixed-design ANOVA.

The predicted Value \times Time interaction was significant, $F(1, 140) = 6.96, p = .01$. As intended, there was no difference in initial evaluations across the unimportant and important value conditions ($M_{\text{imp}} = 6.55, SD = 1.38$; $M_{\text{unimp}} = 6.41, SD = 1.35$).

---

6 Though not the focus of the study, there were some effects of argument order. A main effect of order, $F(1, 140) = 5.70, p = .02$, revealed more positive initial evaluations when strong arguments were presented first and third ($M = 6.54, SD = 1.04$) rather than second and fourth ($M = 6.10, SD = 1.39$). There was also greater impact of argument quality when strong arguments were presented first and third ($strong M = 6.87, SD = 1.04$, vs. weak $M = 6.21, SD = 1.49$), $F(1, 72) = 31.80, p < .001$, rather than second and fourth (strong $M = 6.20, SD = 1.22$, vs. weak $M = 5.90, SD = 1.39$), $F(1, 70) = 1.52, p = .23$; Argument Quality \times Order interaction, $F(1, 140) = 28.20, p < .001$. Finally, there was a Value \times Argument Quality \times Order interaction, $F(1, 140) = 5.46, p < .01$. Such that the expected Value \times Argument Quality interaction was stronger when strong arguments were first and third rather than second and fourth. Yet the predicted Value \times Argument Quality interaction was significant both when strong arguments were first and third, $F(1, 71) = 6.35, p < .01$, and second and fourth, $F(1, 69) = 4.58, p = .024$.

7 Participants were also asked to list thoughts about each facet described in the arguments (after judgments of confidence and amount of elaboration). Favorability of thoughts was calculated for each argument. Argument quality influenced thoughts to a greater extent when values were important (strong $M = 0.66, SD = 0.66$, vs. weak $M = 0.13, SD = 0.30$), $t(69) = 3.19, p = .003$, rather than unimportant (strong $M = 0.47, SD = 0.53$, vs. weak $M = 0.22, SD = 0.41$), $t(75) = 1.31, p = .19$; Value \times Argument Quality, $F(1, 140) = 5.56, p = .019$. 
F(1, 142) = 1.92, p = .26 This appropriately set the stage for examining differential change in reaction to the attack. Postattack evaluations were less affected by the attacking message when initial evaluations had been formed while considering important (M = 5.27, SD = 1.63) rather than unimportant values (M = 4.58, SD = 1.67), F(1, 142) = 14.06, p < .001. These results conceptually replicated Study 3 (and Ostrom & Brock, 1969) and extended the previous findings by showing in the same study that the factor influencing amount of processing of the initial message also produced differential resistance to the attacking message. In addition to the crucial interaction, there was a less important main effect of time, F(1, 140) = 161.30, p < .0001. After the initial strong pro-Tashkentistan arguments, participants rated Tashkentistan’s qualities on those dimensions to be quite positive for the EU (M = 6.42, SD = 1.34). After the weak attacking message, however, participants did not believe that Tashkentistan’s qualities were as positive for the EU (M = 4.93, SD = 1.72). No other effects were significant (Fs < 1.00).

Mediation Analyses

Evidence of elaboration effects on resistance would complete the mediational chain from value importance through message processing to resistance. This would also constitute the most direct evidence to date of elaboration per se producing attitudes that resist later attempts at change. The differential-evaluation measure served as the index of the level of elaboration for each participant. Attitude resistance was indexed as the difference between initial and postattack evaluations. The resistance measure was first regressed on value importance. Replicating the ANOVA results, value importance significantly predicted resistance, \( b = -0.45, t(142) = -2.50, p = .01 \). Important values led to more resistance (less change). Value importance also predicted the differential-evaluation index of elaboration of the initial message, \( b = 1.00, t(142) = 5.77, p < .001 \), with important values leading to greater elaboration. When both value importance and the differential-evaluation index of elaboration predicted resistance, the value importance effect dropped to nonsignificance, \( b = -0.22, t(141) = -0.90, p = .38 \). The differential-evaluation measure of elaboration, however, continued to predict attitude resistance to change, \( b = -0.23, t(141) = -2.15, p = .034 \) (Sobel \( z = 2.53, p = .011 \)).

Discussion

Study 4 replicated and extended previous research by showing in the same study that consideration of important rather than unimportant values during initial message processing increased elaboration of that message as well as resistance to a later attack. Value effects on resistance were also mediated by participants’ amount of elaboration of that first message (indexed by differences in evaluations across dimensions associated with strong vs. weak arguments). To our knowledge, this is the first study to provide experimental evidence of elaboration per se mediating effects of any distal variable (in this case, value importance) on resistance to change.

As described previously, we assume that consideration of important values increases processing because participants become more involved with the issue when considering the issue in relation to important rather than unimportant values. This seems quite plausible given previous discussions of issue involvement that connect issue involvement to settings in which people perceive the topic as related to anything they care about (objects, people, values, etc.; see Kiesler et al., 1969; Petty & Cacioppo, 1979, 1986, 1990). However, to this point, we had no measures directly linking amount of processing to involvement per se. Also, in past involvement and processing research, the data directly linking involvement with processing have manipulated the personal relevance of the message topic, which is hypothesized to be one primary source of involvement (e.g., Petty & Cacioppo, 1979, 1990; Petty et al., 1981). However, in the current setting, there was little reason to believe that the Tashkentistan message was perceived as any more personally relevant to participants when considering important values. Thus, it seemed important to directly address the potential for consideration of values to influence involvement and, through involvement, amount of message processing.

Studies 5A and 5B

As noted earlier, people are hypothesized to be more personally involved in an issue whenever the issue is thought to address something important to the person (values, outcomes, possessions, people; Petty & Cacioppo, 1990). Although values have been previously noted as one possible source of issue involvement, few data directly address this possibility. To date, the data that come closest to addressing this question show that attitude importance is higher when the attitude is viewed as reflecting or as based on one’s core values (e.g., Boninger et al., 1995; Holbrook et al., 2005). Yet, as noted earlier, in the current setting, there was no evidence that participant attitudes were viewed as reflecting or expressing participants’ values. Thus, there were no existing data that directly supported our proposed explanation of value effects on message processing as stemming from value effects on issue involvement per se. Therefore, in Studies 5A and 5B, we included a measure of issue involvement to test whether consideration of important values increases issue involvement, which in turn influences amount of thinking about the message (i.e., elaboration).

Method

Participants and Design

Two hundred sixty-one introductory psychology students participated in Study 5A, and 124 participated in Study 5B. Students
were randomly assigned to conditions in a 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) between-participants design.

Procedure

Participants gathered in a classroom in groups of 2 to 15 and received booklets describing the same cover story and speech interpretation task as in the previous amount-of-processing studies. After the speech interpretation task, participants were asked to report their attitudes toward the topic and to rate how important the issue was to them. Finally, participants were debriefed and dismissed. The only difference between Studies 5A and 5B was the message topic. The topic for Study 5A was the same as that used in previous studies (i.e., Tashkentistan entering the EU). However, Study 5B used a message advocating the building of nuclear power plants in Canada.

Independent Variables

Value importance. Participants were randomly assigned to consider the message in light of either the important or unimportant values used in Studies 1A, 1B, and 3.

Argument quality. Half of the participants received strong arguments, and half received weak arguments. Participants in Study 5A received the same weak or strong messages as in Studies 1A–2B. Participants in Study 5B received either three strong or three weak arguments supporting the building of nuclear power plants in Canada. For example, one strong argument stated that nuclear power was safe because highway transport waste containers can withstand a 30-ft drop and 30-min 1.475 °F fire. In the weak argument conditions, participants read that the highway transport containers can withstand a 3-ft drop from a truck bed, as well as a 3-min 375 °F fire (see Blankenship, 2006).

Dependent Variables

Attitudes. After the speech interpretation task, participants in Study 5A were asked to rate their overall attitude toward Tashkentistan becoming a member of the EU using the same scales as in Studies 1–3. The Cronbach’s alpha for the six items was .88. Participants in Study 5B were asked to rate their attitude toward the building of nuclear power plants in Canada using the same stems as for the previous studies, but replacing “Tashkentistan becoming a member of the EU” with “building nuclear power plants in Canada.” The Cronbach’s alpha for the six items was .91.

Issue involvement. Following the attitude measures, participants were asked to rate how involved they were with the message topic using four items. For Study 5A, participants were asked “How personally involved do you feel with the issue of Tashkentistan entering the EU?” (1 = not at all involved, 9 = very involved). Consistent with issue importance being a key feature of issue involvement (Petty & Cacioppo, 1990), participants were also asked “How important is the issue of whether Tashkentistan becomes a member of the EU?” (1 = not at all important, 9 = very important) and “To what extent should other people feel the issue of Tashkentistan becoming a member of the EU is important?” (1 = not at all important, 9 = very important). Finally, participants were asked “To what extent do you think the issue of whether Tashkentistan becomes a member of the EU warrants consideration?” (1 = not at all, 9 = very much). The Cronbach’s alpha for the four items was .78. For Study 5B, the same items were used, but the topic was changed to the building of nuclear power plants in Canada. The Cronbach’s alpha for the four items was .85.

Results

Attitudes

For both studies, the attitude measure was submitted to a 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) ANOVA. The predicted Value × Argument Quality interaction was significant for Study 5A, F(1, 257) = 11.58, p = .002, and Study 5B, F(1, 120) = 6.01, p = .017 (see Table 3). That is, the difference between the strong and weak argument conditions was greater when values were important rather than unimportant. Thus, these studies provide replications of value importance effects on amount of processing of the message. In Study 5A, there was also an overall main effect of argument quality, F(1, 257) = 16.65, p < .001, with strong arguments (M = 6.83, SD = 1.16) leading to more favorable attitudes than weak arguments (M = 6.21, SD = 1.30).9

Issue Involvement

A 2 (value: important vs. unimportant) × 2 (argument quality: strong vs. weak) ANOVA revealed the expected main effect of value in Study 5A, F(1, 257) = 9.39, p = .002, and Study 5B, F(1, 120) = 5.12, p = .025. Participants reported that they were more involved with the issue of whether Tashkentistan should be admitted to the EU when they had previously considered values that were important (M = 4.54, SD = 1.27) rather than unimportant (M = 4.07, SD = 1.19). Similarly, participants reported greater involvement with the issue of whether more nuclear power plants should be built in Canada when they had previously considered values that were important (M = 7.22, SD = 1.48) rather than unimportant (M = 6.49, SD = 2.06). No other effects were significant in either study (Fs < 1.00). This pattern of effects makes issue involvement a potential mediator of value importance effects on amount of processing. As noted earlier, past manipulations of issue involvement have relied on manipulations of personal relevance. Participants were asked to report how personally relevant each topic was to them, but the value manipulation had no influence on these perceptions (Fs < 1.20).10

9 Participants also completed thought listings. Similar to the attitude results, there was a greater difference in thought favorability between strong and weak arguments when values were important rather than unimportant, Value × Argument Quality interaction, F(1, 257) = 18.37, p < .001, for Study 5A, and F(1, 120) = 11.93, p < .001, for Study 5B. Also, as in previous studies, Value × Argument Quality effects on attitudes were mediated by Value × Thoughts effects (i.e., mediated moderation).

10 Ratings of issue importance (a core part of issue involvement) might seem to reflect participant attitudes (i.e., the issue is important if I support it, but unimportant if I oppose it). However, the correlation between involvement and attitudes is very small (in Study 5A, r = .11; in Study 5B, r = .16). This is true for the involvement measure as a whole and for the issue importance items in particular.
Mediational Analyses

If issue involvement is responsible for value effects on elaboration, then controlling for Issue Involvement × Argument Quality effects should diminish the impact of Value × Argument Quality effects on attitudes. In other words, issue involvement should mediate the moderation of argument quality effects by value importance (cf. Muller et al., 2005; Wegener & Fabrigar, 2000). If issue involvement mediates the moderational effects of value importance, this would be the first evidence that value importance influences amount of processing through perceptions of issue involvement.

As reported earlier, the Value × Argument Quality interaction significantly predicted participants’ attitudes, Study 5A, *b* = 0.26, *t*(257) = 3.40, *p* < .001; Study 5B, *b* = 0.31, *t*(120) = 2.45, *p* = .017. Also as presented earlier, we obtained significant value main effects on issue involvement, Study 5A, *b* = 0.47, *t*(257) = 3.05, *p* = .002; Study 5B, *b* = 0.37, *t*(120) = 2.27, *p* < .025. When involvement, argument quality, and their interaction were used to predict attitudes, the Involvement × Argument Quality interaction was significant, Study 5A, *b* = 0.29, *t*(255) = 4.98, *p* < .001; Study 5B, *b* = 0.26, *t*(118) = 2.76, *p* = .01. Finally, when effects of the proposed mediator were added to the distal predictors of attitudes, the Issue Involvement × Argument Quality interaction remained significant, Study 5A, *b* = 0.25, *t*(255) = 4.16, *p* < .001; Study 5B, *b* = 0.22, *t*(118) = 2.01, *p* = .048, whereas the distal Value × Argument Quality interaction was reduced, though still significant or marginal, Study 5A, *b* = 0.19, *t*(255) = 2.60, *p* = .01; Study 5B, *b* = 0.13, *t*(118) = 1.78, *p* = .08. As noted earlier, the combination of the two significant paths (a direct effect of the distal variable on the mediator and moderation involving that mediator on the back end, when controlling for the distal moderation) supports the mediated moderation pattern (Muller et al., 2005; Wegener & Fabrigar, 2000). 11

Discussion

Studies 5A and 5B replicated previous effects of value importance increasing processing of a related persuasive message using two different message topics. More importantly, the studies also provided evidence for the proposed mechanism behind value importance effects on elaboration of the message. That is, consideration of important values increased the extent to which participants became personally involved in the topic, and this involvement motivated them to elaborate on message content. These results are important for the current setting because they connect the results to the extensive literature on issue involvement and message processing. They are also important for the issue involvement literature because they provide the first evidence for increased involvement when people consider a topic in general as related to cherished values. Although past discussions of issue involvement have noted that people can become involved with a topic for many reasons (e.g., because the topic addresses cherished people, outcomes, values, or possessions), most past research manipulating issue involvement has focused on personal relevance (e.g., Petty & Cacioppo, 1979; Petty et al., 1981). The current research shows that involvement can be increased by consideration of important values, even in a setting where the values have no effect on perceptions of personal relevance and the resulting attitudes are not viewed as based on the values.

Mediational Analyses

If issue involvement is responsible for value effects on elaboration, then controlling for Issue Involvement × Argument Quality effects should diminish the impact of Value × Argument Quality effects on attitudes. In other words, issue involvement should mediate the moderation of argument quality effects by value importance (cf. Muller et al., 2005; Wegener & Fabrigar, 2000). If issue involvement mediates the moderational effects of value importance, this would be the first evidence that value importance influences amount of processing through perceptions of issue involvement.

As reported earlier, the Value × Argument Quality interaction significantly predicted participants’ attitudes, Study 5A, *b* = 0.26, *t*(257) = 3.40, *p* < .001; Study 5B, *b* = 0.31, *t*(120) = 2.45, *p* = .017. Also as presented earlier, we obtained significant value main effects on issue involvement, Study 5A, *b* = 0.47, *t*(257) = 3.05, *p* = .002; Study 5B, *b* = 0.37, *t*(120) = 2.27, *p* < .025. When involvement, argument quality, and their interaction were used to predict attitudes, the Involvement × Argument Quality interaction was significant, Study 5A, *b* = 0.29, *t*(255) = 4.98, *p* < .001; Study 5B, *b* = 0.26, *t*(118) = 2.76, *p* = .01. Finally, when effects of the proposed mediator were added to the distal predictors of attitudes, the Issue Involvement × Argument Quality interaction remained significant, Study 5A, *b* = 0.25, *t*(255) = 4.16, *p* < .001; Study 5B, *b* = 0.22, *t*(118) = 2.01, *p* = .048, whereas the distal Value × Argument Quality interaction was reduced, though still significant or marginal, Study 5A, *b* = 0.19, *t*(255) = 2.60, *p* = .01; Study 5B, *b* = 0.13, *t*(118) = 1.78, *p* = .08. As noted earlier, the combination of the two significant paths (a direct effect of the distal variable on the mediator and moderation involving that mediator on the back end, when controlling for the distal moderation) supports the mediated moderation pattern (Muller et al., 2005; Wegener & Fabrigar, 2000). 11

General Discussion

Values have long been considered important in creating strong attitudes that are resistant to change and that influence behavior (see Allport, 1961; Rokeach, 1968, 1973). Past discussions of value effects on attitude strength have focused on the benefits of

Table 3  
Means, Standard Deviations, and Simple Effects for Attitudes as a Function of Value Importance and Argument Quality in Studies 5A and 5B

<table>
<thead>
<tr>
<th></th>
<th>Argument quality</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strong</td>
<td>Weak</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Values</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5A</td>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>7.06</td>
<td>5.94</td>
<td>1.36</td>
<td>5.07*</td>
</tr>
<tr>
<td>Unimportant</td>
<td>6.61</td>
<td>6.51</td>
<td>1.16</td>
<td>0.51</td>
</tr>
<tr>
<td>5B</td>
<td>Attitudes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Important</td>
<td>6.69</td>
<td>6.05</td>
<td>1.33</td>
<td>2.93*</td>
</tr>
<tr>
<td>Unimportant</td>
<td>6.16</td>
<td>6.46</td>
<td>1.46</td>
<td>−0.76</td>
</tr>
</tbody>
</table>

Note. Standard deviations are in parentheses. *p* < .05.
creating direct, explicit links between values and attitudes (often attempting to make the attitudes value expressive; e.g., Kristiansen & Zanna, 1988; Maio & Olson, 1995; cf. Nelson, 1968; Ostrom & Brock, 1969). Because values come with extensive cognitive structures, attaching an attitude to that structure should impart strength to the attitude (Eagly & Chaiken, 1993, 1998; Scott, 1969). This approach makes sense, and we do not disagree with it. However, the current research, as well as research by Maio, Olson, and colleagues, suggests that this idea may require some caveats. For example, Maio and Olson (1998) suggested that at least some values may not be associated with extensive cognitive structures. Instead, the values act as truisms, in that the values are easily changed when challenged, presumably because the values are rarely questioned or defended (McGuire, 1964; see also Bernard, Maio, & Olson, 2003). Truistic values may not have the kinds of structure-based effects previously described in the literature.

The current research suggests that there may also be less direct effects of values on attitude strength. Consideration of a topic in relation to important values might increase perceptions that the topic itself is important (and, therefore, increase the level of the person’s involvement with the issue). Involvement with the issue can then increase processing of material presented along with those values. If so, then even if the resulting attitudes do not come to represent or express the values themselves (i.e., even if the cognitive structures are not strongly connected), the processing prompted by the values can increase attitude strength (in the current case, resulting in greater resistance to change). The current article reports evidence consistent with each of these mediational steps.

When important values prompt processing, the ultimate result might sometimes be to create direct connections between the values and the attitudes, but it need not be. In the current setting, because the arguments themselves were not phrased such that the values formed the basis for the argument, it may have been less likely for the attitudes to be viewed as representing or expressing the values. Nonetheless, because information processing was extensive when important values were considered, the consideration of important values still created attitudes that were strong. It remains to be seen whether a truistic value is sufficient for creating the current motivating effects of value consideration or whether these effects are most likely with values associated with extensive knowledge structures. If a mere perception of value importance is the key, then even truistic values may produce the current influences of value importance on elaboration of associated messages. This would be an interesting question for future research.

The current work also shows that attitudes more successfully resist change in the face of attack when important rather than unimportant values have been considered with the initial message. For the first time, direct mediational analyses showed that the value effects on resistance were mediated by differing amounts of message processing. Thus, at least in the current paradigm, value effects on resistance can be produced indirectly through value effects on amount of processing. Some past research intended to anchor beliefs to values has also suggested that elaboration might be important (e.g., Nelson, 1968). Therefore, it seems reasonable to ask whether value effects on elaboration of the associated message constitute a large part of value effects on resistance, even when persuasive materials create attitudes that are identified as representing or expressing core values (cf. Holbrook et al., 2005). Because no structure-based value effects on resistance to change have been demonstrated separate from value effects on message processing, it is possible that the current indirect effects are, in fact, the primary reasons for value effects on attitude resistance. It is also quite possible, however, that both types of effects occur under certain circumstances. We can imagine a variety of possible moderators, including whether support or opposition of the values themselves form core parts of the message arguments. We would note, however, that such moderational questions primarily become important when each process has been unambiguously demonstrated in the literature.

Message processing effects may also take on different forms when attitudes are viewed as expressing cherished values. In such settings, a persuasive message might be viewed as supporting the value (if the message is proattitudinal) or opposing the value (if the message is counterattitudinal). If the message is viewed as opposing the value, it could be that people are motivated to reject the message or that they attempt to avoid the message altogether (e.g., Maio & Olson, 1995). We look forward to future research addressing potential moderators of the current processing effects of value importance and of the role of processing in resistance when attitudes are explicitly value relevant.

**Potential Limitations**

The current research used what might seem on the face of it to be a rather artificial setting for value consideration. We chose to use an adaptation of the Ostrom and Brock (1968, 1969) procedure because the procedure represents (a) the primary experimental method previously used to demonstrate effects of values on attitude resistance and (b) a situation in which our alternative route from values → processing → attitude resistance seemed likely to occur, without necessarily going through value-expressive (value-relevant) attitude properties. It is important to note, however, that the current processing effects are not limited to the current paradigm. We have replicated these processing patterns using alternative methods, such as asking people to write about the relation between the value and the information in the message (cf. Nelson, 1968).

Blankenship (2006) also presented data showing the same processing effects and involvement-based mediation (using the nuclear power topic from the current Study 5B) when the values were simply presented for 1.5 s prior to the message, with no explicit instructions to consider the values in relation to the message. Participants were told that the research addressed aids to reading comprehension, but there was no speech interpretation task, and participants did not have to do anything with the values to complete the experimental tasks. Clearly, then, the effects of value importance on processing are not limited to situations where participants have to draw links between values and words in a persuasive message.

Future research could also address more microlevels, such as how the importance of the value influences perceptions of issue involvement. Previous discussions of issue involvement have simply noted that people become more involved if they perceive the topic as related to important values. But there may be a number of ways that values could influence message recipients’ level of
involvement, and these different mechanisms could open up new effects of value consideration. For example, the important value might simply be activated (primed) by the value consideration task. If so, then message recipients might become more involved with any topic ambiguously related to the value (because of its potential relation to the value). Yet these effects might still require a potential relation between the topic and the value in the mind of perceivers.

Other even broader possibilities also exist. It could be, for example, that important values activate the concept of importance. If so, it could also be that important objects, people, or attitudes might have similar effects. This would suggest that perceived relations between the value and message topic might not be necessary. However, it could be necessary for the activated concept to be broad and applicable to the topic at hand (as a value would often be). When more narrow (specific) or inapplicable concepts are activated, their importance might set up a standard against which the perceived importance of the current message topic is compared (cf. Tormala & Petty, 2007). Of course, if this were to occur, the result could be assimilation toward or contrast away from the importance of the activated construct, depending on how similar the importance levels of the standard and the message topic might be (e.g., Herr, 1986; Sherif & Hovland, 1961; see Mussweiler, 2003). If these priming-based mechanisms are operating, then one could imagine many settings to which the current results would generalize (because values could be activated in a variety of ways, including intentional activation of values by advertisers or other message sources) and some to which the current results would not generalize (because contrast effects of importance would be opposite in direction to the current effects). We look forward to future research that examines the value importance–issue involvement (issue importance) relation in greater detail (see also Blankenship, 2006).

**Applied Implications**

The current approach could be useful in many applied domains, when communicators seek to influence those who believe that a topic is utterly irrelevant to them. For example, many youths regard health risks, such as smoking-related illness, as unlikely to affect them (Milam, Sussman, Ritt-Olson, & Clyde, 2000). As a result, they pay little attention to messages on the topic, and their health-related behaviors are difficult to change. Yet the present research suggests that there may be routes other than personal relevance to motivate message recipients to pay close attention to information. Many of the same youths who regard ill effects of smoking (or sun exposure, or unsafe sex, or other risky health behaviors) as unlikely to affect them personally still hold a variety of values as important in their lives. Thus, if the current results hold true, communicators may be able to increase processing of these health messages by getting the message recipients to consider the messages in relation to important values (whether or not those values form the crux of the message content). We look forward to testing these implications of the current research.

**References**


New Editors Appointed, 2009–2014

The Publications and Communications Board of the American Psychological Association announces the appointment of six new editors for 6-year terms beginning in 2009. As of January 1, 2008, manuscripts should be directed as follows:

- **Journal of Applied Psychology** (http://www.apa.org/journals/apl), **Steve W. J. Kozlowski**, PhD, Department of Psychology, Michigan State University, East Lansing, MI 48824.
- **Journal of Educational Psychology** (http://www.apa.org/journals/edu), **Arthur C. Graesser**, PhD, Department of Psychology, University of Memphis, 202 Psychology Building, Memphis, TN 38152.
- **Journal of Personality and Social Psychology: Interpersonal Relations and Group Processes** (http://www.apa.org/journals/psp), **Jeffry A. Simpson**, PhD, Department of Psychology, University of Minnesota, 75 East River Road, N394 Elliott Hall, Minneapolis, MN 55455.
- **Psychology of Addictive Behaviors** (http://www.apa.org/journals/adb), **Stephen A. Maisto**, PhD, Department of Psychology, Syracuse University, Syracuse, NY 13244.
- **Behavioral Neuroscience** (http://www.apa.org/journals/bne), **Mark S. Blumberg**, PhD, Department of Psychology, University of Iowa, E11 Seashore Hall, Iowa City, IA 52242.
- **Psychological Bulletin** (http://www.apa.org/journals/bul), **Stephen P. Hinshaw**, PhD, Department of Psychology, University of California, Tolman Hall #1650, Berkeley, CA 94720. (Manuscripts will not be directed to Dr. Hinshaw until July 1, 2008, as Harris Cooper will continue as editor until June 30, 2008.)

**Electronic manuscript submission:** As of January 1, 2008, manuscripts should be submitted electronically via the journal’s Manuscript Submission Portal (see the website listed above with each journal title).

Manuscript submission patterns make the precise date of completion of the 2008 volumes uncertain. Current editors, Sheldon Zedeck, PhD, Karen R. Harris, EdD, John F. Dovidio, PhD, Howard J. Shaffer, PhD, and John F. Disterhoft, PhD, will receive and consider manuscripts through December 31, 2007. Harris Cooper, PhD, will continue to receive manuscripts until June 30, 2008. Should 2008 volumes be completed before that date, manuscripts will be redirected to the new editors for consideration in 2009 volumes.