
Rhetorical Question Use and Resistance to Persuasion: An Attitude Strength Analysis

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Although previous research has provided indirect evidence that rhetorical questions can increase attitudinal resistance, what little work that was done was not specifically designed to examine the issue. Current models of attitude change suggest that rhetorical questions can increase persuasion and message processing, creating a relatively strong, resistant attitude. These processing and resistance effects in turn may be mediated by a property of attitude strength such as participants' cognitive responses. In Study 1, placing rhetorical questions in a message increased participants' message processing and counterargument generation relative to a control message. In addition, participants' attitudes were mediated by participants' cognitive responses. Study 2 found that a message containing rhetorical questions increased participants' attitudinal resistance to an attacking message more than a control message, and the resistance effects were related to participants' cognitive responses. These results provide the first direct evidence for the resistance effects of rhetorical question use and for mediators.

Keywords: *rhetorical questions; persuasion; resistance; attitude strength*

It is not uncommon to intentionally phrase statements as questions in persuasive communications. In fact, over a 3-year period, about 20% of print advertisements in popular consumer magazines used this form of presentation (Howard, 1989). The communicative technique of presenting a statement in the form of a question in which no overt answer is expected has been used since the times of Aristotle (Areni, 2003). One way of phrasing a sentence is in a rhetorical manner, whereby message recipients are presented a statement with a question stem at the beginning (e.g., "Wouldn't you agree that the education system could benefit from increased funding from the state?"; Areni, 2003; Roskos-Edwoldsen, 2003). Initial research found the

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use of rhetorical questions to increase the persuasiveness of a message relative to a message not containing rhetorical questions (Zillman, 1972).

Although numerous researchers using different methods and messages have come to the same general conclusion (e.g., Burnkrant & Howard, 1984; Enzle & Harvey, 1982; Howard, 1990; Petty, Cacioppo, & Heesacker, 1981; Swasy & Munch, 1985; Zillman & Cantor, 1974), subsequent work has found that the effectiveness of rhetorical questions is a bit more nuanced than initially thought. Petty et al. (1981) found that the effectiveness of rhetorical questions depended on how much thought or issue-relevant thinking (i.e., elaboration) participants engaged in while listening to a message. That is, when participants were not initially motivated to attend to the message (due to the low personal relevance of the topic), rhetorical questions increased the processing of the message content (as evidenced by an effect of argument quality), suggesting that rhetorical questions may help in the creation of strong attitudes, even when topics have low personal relevance. However, when participants were motivated to process the message (i.e., high personal relevance), rhetorical questions actually decreased message processing, in part because they were distracting to participants (see Roskos-Edwards, 2003, for a review of the distraction hypothesis). In a related study, Howard and Kerin (1994) found rhetorical questions to increase persuasion and message processing (via generating questions about the topic) when the topic of the message was not initially involving to participants. In sum, elaboration is an important moderator of rhetorical question effects on persuasion, such that knowing the amount of thought one engages in is important in determining the more distal consequences of the attitude (i.e., persistence over time, resistance to an attack, and prediction of future behavior; Petty & Krosnick, 1995).

Despite these findings, very little work has focused on whether a language variable like rhetorical questions can confer resistance. The most frequent medium for persuasive communications is language and, because of this, the linguistic style as well as content of a communication is crucial for determining persuasive success, both initially as well as later on. How something is said may at times be as important as what is said (Brennan & Williams, 1995). Whether watching television or reading a magazine, people are inundated with persuasive messages, most of which people would consider of little relevance or importance to them. Thus, it seems pertinent to determine how common linguistic variables such as rhetorical questions may create resistant attitudes under these conditions. Creating a message that not only influences peoples' attitudes but does so by helping fend off any counterattitudinal information they may encounter later on would be an important tool for advertisers.

Given the amount of work done by many on rhetorical questions and persuasion (Roskos-Edwards, 2003), it is possible to make predictions concerning attitudinal resistance, particularly when participants aren't initially motivated to process the message. Understanding peoples' ability to resist persuasive attempts has been one of the primary goals guiding research on attitude formation and change (Eagly & Chaiken, 1993; Knowles & Linn, 2004; McGuire, 1964). Creating an attitude that can resist future

attempts to change that attitude was the focus of the initial research examining the role resistance plays in persuasion (McGuire & Papageorgis, 1961). Subsequent work has come to conceptualize attitudinal resistance as an inherent property of attitude strength, with strong attitudes conceptualized as those that can guide one's thoughts and behaviors, persist over time, and resist counterattitudinal appeals (Petty & Krosnick, 1995).

Rhetorical questions, in particular, may be fruitful in creating resistant attitudes, particularly when people aren't initially motivated to consider the message. In fact, Aristotle (1926) addressed the utility of adding rhetorical questions in a speech as an attempt to challenge the arguments of a dissenting view. The purpose of the article is to use common findings with regard to the use of rhetorical questions on persuasion to outline conditions under which attitudes formed from this persuasion technique are resistant to change. Two studies were conducted to test the predictions that rhetorical question use can (a) instigate counterargument generation relative to a message containing no rhetorical questions and (b) create attitudes that can more effectively resist a counterattitudinal appeal.

Rhetorical Question Use and Resistance

Current process-based models in the attitude literature (e.g., the Elaboration Likelihood Model [ELM], Petty & Cacioppo, 1986; Heuristic-Systematic Model [HSM], Chaiken, Liberman, & Eagly, 1989; and Unimodel, Kruglanski, Thompson, & Spiegel, 1999) predict that strong attitudes arise from greater thinking (i.e., elaboration) about the attitude object. In the past, the use of rhetorical questions in a message has increased participants' elaboration of a message when participants were initially unmotivated to process the message (Howard & Kerin, 1994; Petty et al., 1981). This increase in elaboration in turn can create strong (e.g., resistant) attitudes, because the process of elaboration creates associations among the message object, the presented information, and object-relevant knowledge already in memory (Petty, Haugvedt, & Smith, 1995). Under these conditions, the use of rhetorical questions should therefore create a relatively resistant attitude.

Current attitude change models may also help provide insight with regard to the processes behind rhetorical questions' resistance properties. For example, participants' cognitive responses (measured via a thought listing technique; Brock, 1967) have been related to attitudes in high-processing conditions, providing some evidence that the resistant attitude is born in part from elaboration (see Eagly & Chaiken, 1993; Petty et al., 1995). Petty et al. (1981) found that for participants who were exposed to a message that was initially not relevant to them, cognitive responses predicted participants' attitudes only in the rhetorical question conditions. That is, rhetorical questions increase processing and create relatively strong attitudes when used to persuade participants about topics of low personal relevance.

In one study examining the persuasiveness of rhetorical questions in a simulated courtroom setting, Zillman and Cantor (1974) manipulated the valence of participants'

initial attitudes toward a defendant and compared the effect of a message containing rhetorical questions in a defense attorney's arguments on participants' sentencing of the defendant. A measure of "counterpersuasion" (i.e., a measure of resistance following a message attacking participants' attitudes) was also included in the design, which was made up of a prosecuting attorney providing additional information about the case. For the initial assessment of the defendant's sentencing, the message containing rhetorical questions was more persuasive as a function of participants' initial attitudes. That is, in the favorable attitude conditions, rhetorical questions decreased the recommended prison term of the defendant, whereas in the unfavorable condition, rhetorical questions increased the prison term. These results replicated the previous work on rhetorical questions and persuasion (Zillman, 1972), with rhetorical questions increasing persuasion.

Although there were no differences in counterpersuasion as a function of language type, one should be cautious in interpreting these results for a number of reasons. First, the order and valence of the information were confounded, whereby the prosecuting attorney's message (which usually contains negative information about the defendant) was the second message across both conditions but, in essence, was not always the attacking message. Participants in the unfavorable initial attitude conditions receiving the prosecuting attorney's message were not receiving any counterattitudinal information, given that participants initially had negative perceptions of the defendant. Therefore, in these conditions, the second message was not a counterattitudinal one. What is more, rhetorical questions seemed to make participants more receptive to the negative information, for even more extreme jail sentences were given following the prosecuting attorney's information. In the favorable attitude conditions (where the message from the prosecuting attorney was actually counterattitudinal), participants who received the rhetorical question manipulation did not resist the prosecuting attorney's message any more than participants in the declarative condition. These results are tenable, which leads to a second concern. A main effect of language for both favorable and unfavorable attitude conditions occurred, indicating that participants who read a message containing rhetorical questions gave more extreme jail sentences than in the declarative statement conditions. A true test of whether there were differences in resistance after the prosecuting attorney's message would require no main effect of language prior to the attacking message, such that any change in the dependent measure would be due to the change after the attacking message and not prior (Petty et al., 1995). Although the results from the study are useful in determining the effectiveness of rhetorical questions on persuasion, the resistance results are inconclusive.

In sum, the persuasiveness of rhetorical question use has been studied rather extensively (Roskos-Edwards, 2003), which has led to outlining conditions when they can create strong attitudes. Despite knowing the limiting conditions, the possible consequences of attitudes that are formed by a message containing rhetorical questions have been largely unexamined. In addition, the research to date has not

carefully examined the potential mechanisms by which rhetorical questions may increase resistance through increased message processing. This research will explore the possibility that rhetorical questions do indeed increase participants' resistance to an attacking message.

The focus of this work is to examine the effect of rhetorical question use on attitudinal resistance. In Study 1, participants will read a message made up of either strong or weak arguments advocating the use of nuclear power as an effective source of energy, which will also contain either rhetorical questions or not. Participants will then rate their attitude toward the topic of nuclear power as well as generate counterarguments advocating the position. It is expected that using the materials from Study 1 and under the conditions outlined in past research, rhetorical questions in a message will influence participants' message processing and will generate more counterarguments than in the control message. In addition, the increased processing effect of rhetorical questions on attitudes will be mediated by participants' cognitive responses (Brock, 1967) about the message. In Study 2, participants will read either a message containing rhetorical questions or none. After rating their attitude toward the message topic, participants will read a weak opposing message that describes the hazards of nuclear power. Participants will then rate their attitude again and write down any thoughts they had while reading the attacking message. It is expected that participants reading the message containing rhetorical questions will have a more resistant attitude following the attack than in the control conditions, and this resistance will be related to participants' cognitive responses toward the messages.

Study 1

Method

Participants and Design

Participants were 115 introductory psychology students who received partial credit toward completion of course requirements. They participated in groups of 8 to 10 in a classroom setting in a 2 (language: no rhetorical questions vs. rhetorical questions) \times 2 (argument quality: weak vs. strong) completely crossed between-participants design. Participants were randomly assigned to one of the four conditions. Participants read a brief description of an engineering professor who was advocating the use of nuclear power as a source of energy, which included arguments that were pretested to be strong and cogent or weak and specious.

Procedure

Participants were told that each year the Psychology Department assists the Department of Engineering in evaluating editorials, and their task would be to provide ratings of the quality of the editorials. Following these instructions, participants

signed an informed consent form, read some introductory remarks about the editorials they were about to read, and then read one of the messages. In the introductory remarks, participants read a brief description of a professor who was advocating the use of nuclear power. An engineering professor was chosen as the source to keep in line with the cover story and to make the message seem believable to participants. The topic of nuclear power was used because it has been shown to be a topic of low to moderate relevance for participants (Fabrigar, Priester, Petty, & Wegener, 1998; Haugtvedt & Wegener, 1994), which is an ideal condition for testing whether variables like rhetorical questions can influence the amount of information processing (Petty & Cacioppo, 1986). After reading the editorial, participants completed the dependent measures and were debriefed and given course credit for participating.

Manipulated Variables

Rhetorical question use. Half of the participants received a message containing a sentence in rhetorical form at the end of each of the three paragraphs, whereas the other half received a message that had only the sentences in statement form. The sentences were summaries of the position being taken by the writer and were placed after the arguments, which has been shown to be an effective placement (e.g., “Wouldn’t you agree that the above reasons constitute having nuclear power as a viable power source?”; Howard, 1990).

Argument quality. The message contained either three major arguments that were logically sound, defensible, and compelling (i.e., strong arguments) or that were open to challenge and easy to refute (i.e., weak arguments). This type of manipulation has been used frequently in attitude change research to examine the amount of processing involved when people attend to a persuasive appeal. If people are sensitive to the quality of the arguments in the message (i.e., people are influenced by strong arguments more than weak arguments), then people are processing the contents of the message. If people aren’t sensitive to the argument quality manipulation, then it is assumed that people aren’t being affected by the content of the message and are engaging in less “thoughtful” processing (Petty & Cacioppo, 1986).

Dependent Variables

Three sets of dependent measures were used, which included measures pertaining to the participant’s attitude toward the advocated position, cognitive responses with regard to the communication, and counterarguments generated.

Attitudes toward nuclear power. After reading the message, participants were asked to complete a set of dependent measures, which included rating their attitude toward the use of nuclear power on five 9-point semantic differential scales (*harmful/beneficial*, *wise/foolish*, *good/bad*, *favorable/unfavorable*, and *desirable/undesirable*), as well as rating how strongly they agree with the message on a 9-point scale (*strongly agree/*

strongly disagree).¹ The Cronbach's alpha for these six items obtained in this study was .92.

Cognitive responses. After completing the attitude measures, participants completed a cognitive response task similar to the one used in the Petty et al. (1981) study. Participants were instructed to write down any thoughts they had while reading the message. After recording their thoughts, participants were instructed to rate their thoughts as either positive using a plus (+) sign (in favor of nuclear power), negative using a minus (–) sign (opposed to nuclear power), or neutral or irrelevant using a zero. All positive items were summed together as well as the negative items. The cognitive response index was computed such that the difference between the number of positive and negative thoughts divided by the total number of thoughts was used to indicate the overall positivity of thoughts.

Generation of counterarguments. After reading the message and completing all other dependent measures, participants were asked to imagine that they were confronted by a message arguing against the use of nuclear power and then generate counterarguments favoring the use of nuclear power. This method has been used frequently in the attitude change literature and has been shown to be an effective indicator of resistance to persuasion, particularly when processing motivation and ability are high (see Eagly & Chaiken, 1993; Petty & Cacioppo, 1986, for reviews). In fact, McGuire (1964) considered a resistant attitude as one that is linked to a number of counterarguments. This linking may occur, in part, due to participants generating counterarguments or even discussing these counterarguments with others. As a result, these attitudes have already been actively defended. Therefore, resistance occurs, in part, due to practice at resisting counterattitudinal messages. Use of this measure will aid in assessing whether increased elaboration by rhetorical questions leads to increased argumentation.

Manipulation checks. Manipulation checks embedded in the questionnaire assessed the effectiveness of the language and argument quality manipulations. The language manipulation included an item asking the extent to which the speaker used questions in the message. For the argument quality manipulation, participants were asked to rate how strong the arguments in the message were.

Results

Manipulation checks. A one-way analysis of variance (ANOVA) on the argument quality manipulation revealed that participants in the strong argument conditions ($M = 6.19$, $SD = 1.95$) reported the message as being stronger than participants in the weak argument ($M = 4.51$, $SD = 2.11$) conditions, $F(1, 113) = 19.65$, $p < .001$, $d = .83$, suggesting that the argument quality manipulation was successful. In addition,

a one-way ANOVA on the language manipulation check revealed a main effect for language, $F(1, 113) = 92.07, p < .001, d = 1.79$, with participants in the rhetorical question conditions ($M = 7.07, SD = 1.46$) reporting the writer using more questions in the message than in the control condition ($M = 4.11, SD = 1.84$).

Participants' attitudes. A 2 (language: rhetorical question vs. no rhetorical question) \times 2 (argument quality: strong vs. weak arguments) ANOVA on the attitude measure revealed a main effect of argument quality, $F(1, 111) = 12.31, p = .001, d = .09$, with strong arguments ($M = 6.56, SD = 1.39$) leading to more favorable attitudes than weak arguments ($M = 5.71, SD = 1.22$). This main effect was qualified by the expected language \times argument quality interaction, $F(1, 111) = 4.75, p = .031, d = .04$. Subsequent analyses focusing on language revealed that for the control conditions, there was no difference between strong ($M = 6.43, SD = 0.82$) and weak arguments ($M = 6.11, SD = 1.12$), $F(1, 54) = 1.48, p = .230, d = .006$, suggesting that participants were not processing the message.² In the rhetorical question conditions, there was a difference between the strong ($M = 6.66, SD = 1.75$) and weak arguments ($M = 5.30, SD = 1.20$), $F(1, 57) = 11.92, p = .001, d = .11$, suggesting that participants were thinking about the message more relative to the control condition.

Cognitive responses. A 2 (language: rhetorical question vs. no rhetorical question) \times 2 (argument quality: strong vs. weak arguments) ANOVA on the cognitive response index revealed a main effect of argument quality, $F(1, 111) = 8.06, p = .005, d = .08$, with strong arguments ($M = -0.11, SD = 0.78$) leading to more positive cognitive responses than weak arguments ($M = -0.46, SD = 0.63$). A language \times argument quality interaction was not significant, $F(1, 111) = 1.75, p = .188, d = .03$. However, inspection of the means suggests that they are in the expected direction consistent with greater processing in the rhetorical question ($M_{\text{strong}} = 0.02, SD = 0.76$ vs. $M_{\text{weak}} = -0.54, SD = 0.61$) than control conditions ($M_{\text{strong}} = -0.15, SD = 0.66$ vs. $M_{\text{weak}} = -0.41, SD = -0.54$). That is, argument quality did affect participants' cognitive responses differentially depending on the language type used. The lack of significance may have been due to the large amount of variability in cognitive responses, given the number of participants in the study. No other effects were significant ($F_s < 1$). A stronger test of the role of cognitive responses on participants' attitudes would be to examine the relation between the two in each language condition.

Counterargument generation. Given that there was no difference in attitude favorability across language in the strong argument conditions [as evidenced by the lack of an effect of language in the strong argument conditions, $F(1, 56) = .39, p > .54$], one can test for differences in counterargument generation in those conditions because any differences in counterargument generation cannot be due to differences in initial favorability. A one-way ANOVA on participants' generation of counterarguments in the strong argument conditions revealed the predicted main effect of language,

$F(1, 56) = 5.55, p = .022, d = .58$, with participants in the rhetorical question conditions ($M = 3.52, SD = 1.58$) generating more counterarguments than participants in the control conditions ($M = 2.62, SD = 1.55$). Thus, participants receiving rhetorical questions tended to show evidence for a relatively resistant attitude by being able to counterargue a message opposing the use of nuclear power.

Mediational Analyses

As noted by Petty and Cacioppo (1986), an argument quality manipulation is an indirect measure of participants' message elaboration. Any effects of argument quality on a variable like attitudes are most likely due to participants' elaboration of the message content. As a result, an argument quality manipulation can be used in analyses aimed at examining the mediational role of participants' cognitive responses on their attitudes from their amount of thinking.

It was predicted that the effect of argument quality on participants' attitudes toward nuclear power would be mediated by participants' cognitive responses in the rhetorical question conditions only. Using a procedure similar to one proposed by Baron and Kenny (1986), the attitude measure was regressed on the argument quality variable, with the weak argument conditions dummy coded as 0 and the strong argument conditions coded as 1. Starting with the rhetorical question conditions, consistent with the ANOVA results, the argument quality variable predicted the participants' attitudes, $b = 1.37, t(57) = 3.45, p = .001, R^2 = .17$, with strong arguments leading to more favorable attitudes. Argument quality predicted participants' cognitive responses, $b = .52, t(57) = 2.89, p = .005, R^2 = .13$, with strong arguments leading to more positive cognitive responses. Participants' cognitive responses were also a significant predictor of participants' attitudes, $b = .97, t(57) = 3.62, p = .001, R^2 = .19$, with greater thought positivity leading to more positive attitudes. When both argument quality and cognitive responses were entered in the same model predicting scores on the attitude measure, the argument quality effect remained significant, $b = .98, t(1, 56) = 2.44, p = .01, R^2 = .11$, along with cognitive responses, $b = .73, t(1, 56) = 2.65, p = .01, R^2 = .12$, suggesting that both had independent effects on attitudes.

A Sobel test was conducted to examine whether the amount of change in the effect of the argument quality variable on attitudes when including cognitive responses in the model was significant. Briefly, a Sobel test examines whether a mediator carries the influence of an independent variable on the dependent variable—in this case, whether participants' cognitive responses carry the influence of the rhetorical question manipulation on participants' attitudes. A significant effect of z would suggest cognitive responses partially mediating the argument quality effect on attitudes. The test revealed a significant change in bs ($z = 2.26, p = .02$), with argument quality having its effect on attitudes partially through cognitive responses.

In the control message conditions, the argument quality variable did not predict the participants' attitudes, $b = .32, t(54) = 1.21, p = .23, R^2 = .03$, which was expected. In addition, argument quality did not predict participants' cognitive responses, $b = .26,$

$t(56) = 1.64, p = .11, R^2 = .04$. Participants' cognitive responses also did not predict participants' attitudes, $b = -.03, t(56) = -0.14, p = .89, R^2 = .001$. As a result, no mediational tests could be performed.

Discussion

As predicted, rhetorical question use increased participants' processing of the message relative to a control message. This result should not be too surprising, and in fact, the attitude data replicate previous work by Petty et al. (1981) and others with a different message topic. What is the bigger contribution that goes beyond previous research is that the participants in the rhetorical question conditions generated more counterarguments supporting the position of nuclear power relative to participants in the control message conditions. These results suggest that participants in the rhetorical question conditions formed a more thoughtful attitude than those in the control message conditions. Indeed, participants' attitudes were partially mediated by their cognitive responses, suggesting that participants engage in more issue-relevant thinking in those conditions, which is also consistent with the significant language \times argument quality interaction on the attitude measure. Overall, this study suggests that rhetorical question use in a message can increase processing and can lead to positive strength-related consequences, such as defending one's attitude.

Actively defending one's attitude by countering is just one type of measure of attitudinal resistance. One may also conceptualize resistance as an outcome related to a persuasive attempt, much like persuasion (Wegener, Petty, Smoak, & Fabrigar, 2004). That is, just as persuasion is defined as the amount of attitude change, one can conceptualize that resistance can be considered the lack of attitude change. By conceptualizing resistance in this way, one can make predictions concerning many variables and resistance effects that parallel those in persuasion that may not have been considered in the past.

Another advantage of this type of conceptualization of resistance is that one can provide an attacking message to participants, thereby controlling the type of message participants may be instructed to counterargue as well as any variability associated with individual differences in the generation of an attacking message. Therefore, Study 2 will incorporate an attacking message into the design and assess attitudes toward nuclear power both before and after the attacking message, with the difference between the two being the measure of resistance.

Study 2

The results from Study 1 set the stage for creating a context (e.g., relatively low initial motivation to process a message) where it would be possible to measure an increase in elaboration when participants are given a message containing rhetorical

questions and also provided the first conclusive evidence that rhetorical questions can create a relatively resistant attitude. Study 2 will build on the results of Study 1 by using the same context so that it would be reasonably expected that an increase in processing will occur in the rhetorical question conditions relative to the control conditions. Participants will also be exposed to only the strong argument versions of the message from Study 1. The weak argument conditions were dropped from Study 2 for two reasons. One, because it is reasonable to assume that an increase in processing will occur, which would replicate Study 1. Second, this was done to equate attitude favorability and message content across language conditions. That is, Study 1 found a difference in argument quality on attitudes; therefore, collapsing across argument quality conditions may increase error variance in the attitude measure. It is expected that the use of rhetorical questions in a message will increase participants' resistance to an attacking message (reflecting less change from a preattack assessment to a postattack assessment) relative to a control message. This increase in resistance, in turn, will be related to participants' cognitive responses that they generated while reading the attacking message.

Method

Participants and Design

Participants were 66 introductory psychology students who received partial credit toward completion of course requirements. They participated in groups of 8 to 12 in a classroom setting. The experimental design was a 2 (language: rhetorical questions vs. no rhetorical questions) \times 2 (time: preattack vs. postattack) mixed design with time as a within-participants variable. As in Study 1, participants read a brief description of a professor who was advocating the use of nuclear power as a source of energy, then read the strong argument version of the message from Study 1. After reporting their responses to the first set of dependent measures, which included their attitudes toward the use of nuclear power, participants read a message from another engineering professor who was against the use of nuclear power. Arguments in this message were relatively weak and easy to counterargue. After reading the attacking message, participants were then asked to report their attitudes toward the use of nuclear power as well as other dependent measures.

Dependent Variables

Preattack attitudes toward nuclear power. Participants' attitudes toward the proposal were assessed in the same way as in Study 1. The Cronbach's alpha for the five items obtained in this study was .90.

Postattack attitudes. After reading the second editorial, participants completed the same set of dependent measures related to the use of nuclear power. Subtracting the postattack attitudes from the initial attitudes will result in a measure of attitudinal resistance. The Cronbach's alpha for these six items obtained in this study was .95.

Table 1
Study 2 Attitudes Toward Nuclear Power
as a Function of Language and Time

Language Condition	Preattack	Postattack
Rhetorical question	6.13 (1.78)	5.54 (1.81)
Control	6.24 (1.32)	5.05 (1.48)

Note: All values on a 9-point scale. Standard deviations are presented in parentheses.

Cognitive responses. Participant's cognitive responses were assessed the same way as in Study 1.

Manipulation check. As in Study 1, manipulation checks embedded in the questionnaire assessed the effectiveness of the language manipulation, which included one item that assessed the extent to which the speaker added questions in the message.

Results and Discussion

Manipulation check. A one-way ANOVA on the language manipulation check revealed an effect for language, $F(1, 64) = 22.96, p < .001, d = 1.18$, with participants in the rhetorical question condition ($M = 5.40, SD = 2.42$) reporting that the writer used questions in the message more than in the control condition ($M = 2.94, SD = 1.73$).

Participants' attitudes toward the proposal. A 2 (language: rhetorical question vs. no rhetorical question) \times 2 (time: preattack vs. postattack) mixed design ANOVA revealed a main effect of time, $F(2, 64) = 68.54, p < .001, d = .53$, such that participants' initial attitudes ($M = 6.14, SD = 1.64$) were more in favor of nuclear power than their attitudes following the attacking message ($M = 5.28, SD = 1.72$). Qualifying this main effect was the expected language \times time interaction, $F(1, 64) = 4.31, p = .042, d = .06$ (see Table 1). For participants' initial attitudes, it was expected that no difference would exist on the language variable. These results would lead to a more accurate test of the resistance effect, for any change that has occurred will be due to change after the attacking message rather than before (Petty et al., 1995). An ANOVA on participants' initial attitudes revealed no effect of language, $F(1, 64) = 0.09, p = .754, d = .003$. That is, there was no difference in favorability between the rhetorical question ($M = 6.13, SD = 1.78$) and control conditions ($M = 6.24, SD = 1.32$). Yet, after the attacking message, attitudes had become less favorable in the control conditions ($M = 5.05, SD = 1.48$) than in the rhetorical question conditions ($M = 5.54, SD = 1.81$), $F(1, 64) = 4.31, p = .042, d = .06$. This indicates that when participants received the initial message containing rhetorical questions, their attitudes were more resistant to change than participants who received the control message.

Supplemental analyses.^{2,3} It was also predicted that participants' cognitive responses would predict participants' attitudinal resistance in the rhetorical question conditions and not in the control conditions, providing further evidence of increased processing in the rhetorical question conditions. Participants' cognitive responses were regressed onto the resistance measure (i.e., Time 2 attitudes subtracted from Time 1 attitudes) for both the control and rhetorical question conditions. As expected, cognitive responses predicted resistance in the rhetorical question conditions, $b = .489$, $t(32) = 8.45$, $p = .007$, $R^2 = .21$, and not in the control conditions, $b = .046$, $t(32) = .21$, $p = .837$, $R^2 = .11$. Thus, one manner in which rhetorical questions can increase resistance is through increasing thoughtful processing of the message, a finding similar to the work on rhetorical question use and persuasion by Burnkrant and Howard (1984), Swasy and Munch (1985), and Petty et al. (1981).

The results of Study 2 are consistent with rhetorical question use in a message, creating resistant attitudes relative to a control message. These results follow nicely with previous work on attitude strength and rhetorical question use and persuasion (Roskos-Edwards, 2003). In addition, participants' cognitive responses generated while reading the attacking message predicted the resistance effect in the rhetorical question conditions only. This research provides a first step in examining differences in attitudinal resistance not only for rhetorical questions but, indeed, for any linguistic variable.

General Discussion

Although past research on rhetorical question use and persuasion has been fruitful, it has been unclear what role the rhetorical questions play in the attitudinal resistance processes. Based on previous work concerning the effectiveness of rhetorical questions and persuasion, this work focused on outlining when rhetorical question use can increase attitudinal resistance and exploring the mechanisms behind the resistance effects. Study 1 found that adding rhetorical questions at the end of paragraphs in a message led to more thoughtful processing and greater counterargument generation relative to a control message. This increase in processing created by rhetorical questions was partially mediated by participants' cognitive responses. Study 2 used a different measure of resistance and found that rhetorical questions led to greater attitudinal resistance to an attacking message and more thoughtful processing relative to a control message. Participants' amount of resistance was predicted by their cognitive responses.

Rhetorical questions increase processing and, in turn, resistance to persuasion via less attitude change and generation of counterarguments relative to a message containing no rhetorical questions. Some of that processing may be participants carefully considering the extent to which they believe the message arguments to be true or valid, or even their own assessment of whether they know enough beyond the message information to ascertain the validity of the information. For some participants,

the processing is certain and straightforward and may be integrated into an existing knowledge base of information they have on the topic.

Results from these studies and studies presented elsewhere (Howard & Kerin, 1994; Petty et al., 1981) have found the effectiveness of rhetorical questions on persuasion to be related to participants' cognitive responses, suggesting that attitudes created with rhetorical questions have properties similar to those of strong attitudes. Other strength-related properties might also be related to attitudes formed by rhetorical question use. For example, current work in the persuasion domain has found attitudinal confidence to also be a property of resistance in high elaboration conditions. Using the self-validation hypothesis as a guide (Petty, Brinol, & Tormala, 2002), Tormala and Petty (2004) found elaboration to moderate the relation between resistance and attitude certainty. In two studies, the use of both contextual self-reports of amount of thinking (Study 1) as well as an indicator of a more chronic type of elaboration (i.e., need for cognition; Cacioppo & Petty, 1982; Study 2) found elaboration to moderate the effect of certainty on resistance to persuasion, such that attitudinal certainty predicted resistance only for participants who reported thinking a relatively high amount about the issue. Rhetorical questions tend to invite a response from the message recipient, overt or otherwise. This response may increase the link between one's attitude and certainty related to that attitude via a self-validation process. That is, rhetorical questions may increase the certainty of one's attitudes through an implicit response.

Rhetorical question use in a message may also be related to another strength-related property, attitude accessibility (Fazio, 1989, 1995). Briefly, accessible attitudes are those that come to mind readily through repeated expression of that attitude and can influence whether future persuasive messages relevant to that attitude are attended to as well as affect behavioral responses related to that attitude. With respect to rhetorical question use, the consistent reiteration of information via a rhetorical question would provide an opportunity for a message recipient to rehearse his or her evaluation of the information and thus increase the accessibility of that information. In fact, Roskos-Edwoldsen (2003) suggests that the summation of information in terms of a question may increase the accessibility of that attitude related to that information, in part of the reiteration of that information. Future work on rhetorical question use and other strength-related properties might want to take these possibilities under consideration.

A distinction commonly made in the real world but less so in the research is the use of tag questions versus rhetorical questions (Areni, 2003; Roskos-Edwoldsen, 2003), with the biggest difference between the two being structural (i.e., the location of the question part in the sentence). Tag questions are those in which the question part is at the end of the sentence (i.e., ". . . , don't you think?"; Areni, 2003). This distinction has sometimes gone unnoticed and these question types have been used interchangeably. However, when isolating the research on one type or the other, different

evaluations and consequences have been found to be related to each question type. For example, tag questions are often viewed by both researchers and message recipients as a common component of powerless language and result in decreased persuasion (however, see Blankenship, Craig, & Holtgraves, 2004), in part because they can soften the effect of statements (O'Barr, 1982), whereas rhetorical questions have been found to reliably increase persuasion. In a recent study examining the effects of source characteristics on tag questions and persuasion, source credibility moderated the effects of tag questions on persuasion, with increased persuasion occurring when a credible source used tag questions and the typical decrease in persuasion was found when a low credibility source used tag questions (Blankenship et al., 2004). Although that study suggests that some similarities exist between the two question types, there may be different long-term consequences or different processes related to the long-term consequences for an attitude that is formed with one question type or another. Further research should outline the similarities and differences between the two question types for both persuasion and consequences related to persuasion.

Differences between the question types also exist from a message processing point of view. Blankenship and Holtgraves (2005) found that when participants were not motivated to process the communication, tag questions affected agreement with the message but did not affect processing. That is, no matter how strong (or weak) the arguments were, placing tag questions in the communication led to the same amount of agreement toward the message topic. These results are not consistent with the work on rhetorical questions, suggesting that there may be a qualitative difference between the two linguistic styles. Subsequent work has found that tag question use can increase processing under some conditions, such as when a credible source uses them (Blankenship et al., 2004). On the other hand, similar to work on rhetorical questions and persuasion, participants receiving tag questions who were motivated to process the message did not process the message more relative to participants receiving a control message. Thus, despite the conceptual similarity between tag and rhetorical questions, the placement of the question in the sentence (which ultimately characterizes the type of question) may greatly affect the persuasiveness of the communication and the possible processes involved. It is important for future research to understand not only the effect of the two question types but also how they may have effects that vary by situation, source, and recipient.

Rhetorical questions seem to be particularly useful in prompting processing, persuasion, and resistance about topics that may be perceived to be low in personal relevance. This may be particularly useful for messages concerning topics and behaviors that people are unlikely to see as relevant to them at the present moment. For example, people are confronted with many products and services every day. With respect to health behavior, knowing about diabetes prevention or high cholesterol risks *before* one actually has diabetes or high cholesterol could go a long way toward improving the health of our society. However, these messages are likely to be seen as having

little personal relevance to the unaffected. Rhetorical questions in these messages may enhance the processing and effectiveness of these messages. Commercially, the use of rhetorical questions in advertising or political campaigns could also be helpful in designing messages that will get people involved or at least thinking relatively more about the issues at hand.

It is clear that linguistic cues have distinct and important effects on message processing. Current dual- and multiprocess theories provide a framework for continuing to explore the distinctions between different linguistic variables and their subsequent effect on processing, persuasion, and resistance.

Notes

1. All dependent measures were on a 9-point scale unless otherwise noted.
2. The statistical power required to avoid making a Type II error when predicting null results in the control conditions with 28 participants per cell is about 0.96, meaning that there is a 4% chance of making a Type II error.
3. A one-way ANOVA on the cognitive response index resulted in a marginal effect of language, $F(1, 64) = 2.67, p = .11$, with participants reporting more positive cognitive responses in the rhetorical question than control conditions. Although only trending on traditional significance, these results suggest that rhetorical question use increased thought positivity (Miller & Coleman, 1981).

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