

Personality and Persuasion: Need for Cognition Moderates the Persistence and Resistance of Attitude Changes

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Hypotheses about the persistence and resistance of attitudes and beliefs formed by individuals scoring high or low in Need for Cognition (NC; Cacioppo & Petty, 1982) were derived from the Elaboration Likelihood Model of persuasion (Petty & Cacioppo, 1986). In Study 1, both high-NC and low-NC individuals formed evaluatively similar attitudes toward an unfamiliar attitude object (a new product) after exposure to a persuasive message (an advertisement). The newly formed attitudes of high-NC individuals decayed less than the newly formed attitudes of low-NC individuals over a 2-day period. In Study 2, both high-NC and low-NC individuals were persuaded by an initial message that a food additive was unsafe. However, when immediately exposed to a second countermesssage arguing that the product was safe, the initial experimentally created beliefs of high-NC individuals were shown to be more resistant to change than the experimentally created beliefs of low-NC individuals.

Understanding the role of individual difference factors in persuasion is of longstanding interest among personality and social psychologists. One of the earliest systematic efforts in the study of personality and persuasion was undertaken by Hovland and his colleagues at Yale in the 1940s and 1950s. Efforts of this group culminated in the publication of the book *Personality and Persuasion* (Hovland & Janis, 1959). A stated long-range goal of research by the Yale group was the development of general formulae “which could be used to predict, within a very narrow range of error, the degree to which any given person will be influenced by any given communication” (Janis & Hovland, 1959, p. 14). Self-report measures of influenceability, personality (e.g., self-esteem), and intellectual ability were all examined for their relationships to opinion change. Although the Yale group’s goal of finding general factors associated with persuasibility was quite ambitious, the outcome was generally unsuccessful. Nevertheless, their efforts did lead to the consideration of a general theoretical structure in which individual attributes and persuasion were hypothesized to be linked (Hovland & Janis, 1959).

Research on the role of personality factors in persuasion continued in several different directions after the publication of *Personality and Persuasion*. About 10 years ago, Eagly (1981) reviewed research in the area and outlined three general strategies for understanding the effects of individual differences in persuasion that had developed. In the *personality strategy*, a personality theory was used to identify traits that could affect

attitude change and a mechanism by which this change could occur. With this strategy, differences in levels of authoritarianism (e.g., Johnson & Izzett, 1969), anxiety (e.g., Janis, 1954), internal–external locus of control (e.g., Lefcourt, 1972; Phares, 1973), and self-esteem (e.g., Janis & Field, 1959; Janis & Rife, 1959) were used to identify individuals who were more or less likely to be influenced by an appeal. For example, on the basis of the notion that people with an external locus of control (Rotter, 1966) are more controlled by external events than are people with an internal locus of control, it was hypothesized that externals would be more susceptible to an externally originated persuasive communication than internals (e.g., Lefcourt, 1972).

A second approach identified by Eagly (1981), the *attitude change strategy*, involved examination of persuasion theories for implications related to individual differences. That is, a structure or process specified by an attitude change theory was operationalized at an individual level of analysis. Thus, for example, implications of social judgment theory (Sherif & Sherif, 1967) were examined by studying individuals who differed in the widths of their latitudes of acceptance or rejection (e.g., Eagly & Telaar, 1972; Zimbardo, 1960).

A third approach identified by Eagly (1981), the *personality-attitude change strategy*, involved the integration of the personality and attitude change approaches:

In the personality approach, ideas about how the trait affects social influence are given in the personality theory itself, but this third, hybrid approach uses personality theory as a source of ideas about traits and not as a source of ideas about how attitude change takes place. The trait’s implications for social influence are worked out through an attitude theory’s specification of how attitudes and beliefs are changed, and the trait is assumed to affect persuasion through its impact on the mediating processes specified by the theory. (Eagly, 1981, p. 182)

At the time of Eagly’s review, the most thoroughly developed example of research using the personality-attitude change approach was McGuire’s (1968) “information-processing” theory

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in which the effects of self-esteem and intelligence on the persuasion processes of message reception and yielding were explored. Previous personality approaches generally had not focused on the processes of influence, but rather on the general outcome of more or less influenceability. In contrast, McGuire (1968) used personality variables to gain a better understanding of the underlying processes by which persuasion outcomes were achieved.

Interest in McGuire's (1968) approach to understanding the impact of self-esteem and intelligence on persuasibility continues today (e.g., see review by Rhodes & Wood, 1992). Although McGuire's work was the best example of a personality-attitude change strategy at the time of the Eagly (1981) review, at least two other personality variables have been wed to attitude change theories by psychologists interested in the relationship of personality and persuasion—Self-Monitoring (Snyder, 1974) and Need for Cognition (Cacioppo & Petty, 1982). Specifically, the self-monitoring concept has been linked successfully to functional theories of attitudes (cf. Katz, 1960; Katz & Stotland, 1959; Smith, Bruner, & White, 1956) by Snyder and DeBono (1985; DeBono, 1987). In the relevant research, different kinds of persuasive appeals have been shown to interact with individual differences in self-monitoring in determining the extent of persuasion. In the present research, we focus on need for cognition and its relationship to two routes to persuasion models of influence. In particular, we examine the hypothesis that individual differences in processing of the same persuasive appeal can have important implications for the persistence and resistance of newly formed or changed attitudes.

Need for Cognition and Two Routes to Persuasion

The Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1986) and the Heuristic-Systematic Model (HSM; Chaiken, Liberman, & Eagly, 1989) characterize persuasion as occurring by the relative operation of one of two routes. In some cases, people are both motivated and able to extensively process and elaborate issue-relevant information in forming or changing their judgments. In these situations, the subjective merits of the available information determine the extent of influence. However, in other instances people are relatively unmotivated or unable to engage in an effortful analysis, and cues such as the expertise or attractiveness of an endorser or the sheer number of arguments presented serve as the basis for persuasion. The former case has been characterized as attitude change via the central route (or via systematic processing) and the latter case as attitude change via the operation of the peripheral route (or via heuristic processing).¹

A number of situational manipulations have been shown to moderate the route to persuasion. Thus, for example, varying the personal relevance of an issue by indicating to undergraduates that policies advocated in an upcoming message were likely (high relevance) or unlikely (low relevance) to affect them personally has been shown to influence the extent to which individuals elaborate on message arguments or rely on simple cues (e.g., Chaiken, 1980; Leippe & Elkin, 1987; Petty & Cacioppo, 1979; Petty, Cacioppo, & Goldman, 1981).

Cacioppo and Petty (1982) reasoned that just as there are situational factors (such as personal relevance) that are asso-

ciated with increases or decreases in the amount of effort individuals put into thinking about the merits of issues, objects, and people, so, too, might there be chronic individual differences in this regard. The Need for Cognition (NC) scale was developed specifically to tap individual differences in intrinsic motivation to engage in effortful cognitive endeavors (Cacioppo & Petty, 1982; Cacioppo, Petty, & Kao, 1984). A number of studies have provided support for the utility of the need for cognition construct (e.g., Lassiter, Briggs, & Bowman, 1991; Srull, Lichtenstein, & Rothbart, 1985; see review by Petty & Cacioppo, 1986).

Of greatest relevance here is that research with the NC construct has shown that it can be used to assess chronic individual differences in the likelihood of thinking about a persuasive communication. Cacioppo, Petty, and Morris (1983), for example, exposed college students to a counterattitudinal advocacy containing either strong or weak arguments for issues such as raising tuition or instituting senior comprehensive examinations. Results revealed that the postcommunication attitudes of high-NC individuals were more influenced by the quality of message arguments than were the attitudes of low-NC individuals. An experiment by Haugtvedt, Petty, and Cacioppo (in press) suggests that the influence of NC can also be quite strong in settings with brief message exposure and relatively neutral attitude objects. Haugtvedt et al. (in press) varied the quality of arguments (product attributes) in an advertisement for a fictitious brand of typewriter. Results revealed that the attitudes of high-NC individuals were influenced by the quality of the product attributes in the ad, whereas low-NC individuals were relatively uninfluenced (see also Batra & Stayman, 1990).

Just as high-NC individuals are more influenced by the quality of the arguments in a message, low-NC individuals have been shown to be more influenced by peripheral cues. For example, in one study Haugtvedt et al. (in press) held the quality of product attributes constant and varied the attractiveness of the endorsers pictured in an advertisement for a typewriter. Although the attitudes toward the product of high-NC individuals were uninfluenced by the endorser manipulation, attitudes of low-NC individuals were more positive toward the product associated with the physically attractive than the unattractive endorsers. In addition to the aforementioned interaction of NC and source attractiveness, other studies have shown that the attitudes of low-NC individuals tend to be more influenced by factors operating as peripheral cues, such as the perceived number of other people in support of an advocated position (Axsom, Yates, & Chaiken, 1987; Haugtvedt, Petty, & Cacioppo, 1986).

In short, the available research strongly supports the view that the attitudes of high-NC individuals change as a result of thinking about the merits of the issue-relevant arguments presented in a communication, but the attitudes of low-NC individuals are more likely to change as a result of simple cues in the persuasion context. The NC construct, therefore, has been used to operationalize the motivation to elaborate component of attitude change theories such as the ELM and HSM (see Chaiken, 1987; Petty & Cacioppo, 1986). As such, it has also been used in a manner consistent with the personality-attitude change strategy outlined by Eagly (1981).

¹ Use of heuristics is just one peripheral process.

Beyond Initial Measures of Persuasibility: Personality Variables and Consequences of the Route to Persuasion

Research using the self-monitoring and need for cognition personality constructs suggests that the personality-attitude change strategy remains a productive approach to learning more about both attitude change processes and the personality variable. It is interesting to note, however, that all of the aforementioned research has focused only on initial indicators of persuasion. That is, none of the studies outlined has examined the durability of attitudes and beliefs formed by individuals characterized as possessing more or less of a particular trait. Yet, implications for the durability of attitudes and beliefs formed by high- and low-NC individuals can be directly derived from the ELM. Specifically, one of the interesting ideas fostered by considering the central versus the peripheral routes is that two individuals may ultimately express identical opinions about some issue, person, or object, but the bases for the judgments are hypothesized to have quite different implications with regard to the strength of the attitude.

Under high elaboration conditions, the issue-relevant attitude schema is likely to be accessed, rehearsed, and manipulated more times, strengthening the interconnections among the components and rendering the attitude schema more consistent, accessible, enduring, and resistant to change than under low elaboration conditions (see reviews by Chaiken et al., 1989; Petty & Cacioppo, 1986). As a result of their greater elaboration of messages, attitudes of high-NC individuals should have a more extensive and differentiated structure of thoughts and associations supporting them. The many connections supporting their attitudes provide greater protection against decay or interference. That is, if one aspect of why one likes an object is "lost," other parts of the structure would be able to support the attitude. Attitudes of low-NC individuals, which are more likely to be based on a single simple association or inference, may be more susceptible to decay or interference. If supportive information is less available or accessible to low-NC than to high-NC individuals, they will have greater difficulty defending their attitudes from attack.

Some evidence supportive of the differential implications of attitudes expressed by high- and low-NC individuals was reported by Cacioppo, Petty, Kao, and Rodriguez (1986). On the basis of the ELM, Cacioppo et al. (1986) predicted that individuals possessing attitudes based on greater elaboration should exhibit higher levels of attitude-behavior consistency than individuals possessing attitudes based on less elaboration. Reports of attitudes toward candidates in the 1984 presidential election campaign and subsequent voting behavior were used to examine the attitude-behavior consistency hypothesis. Consistent with predictions, Cacioppo et al. (1986) found that the attitudes toward the candidates of individuals scoring high in NC were more predictive of their voting behavior than were the attitudes of individuals scoring low in NC.

In the present article, we provide the first tests of hypotheses about two additional differences between high- and low-NC individuals in the consequences of their attitudes. Specifically, we examine the idea that even though the attitudes and beliefs of high- and low-NC individuals may appear identical following a persuasive communication, these attitudes differ in their like-

lihood of persisting over time and in resisting counterpersuasion attempts. Study 1 focuses on persistence and Study 2 examines resistance.²

Study 1: Need for Cognition and the Persistence of Judgments

Although some effort has been devoted to the investigation of situational factors that influence the persistence of attitude change (e.g., Boninger, Brock, Cook, Gruder, & Romer, 1990; Chaiken, 1980; Lydon, Zanna, & Ross, 1988; see Cook & Flay, 1978), little research has examined differences in delayed responses of people who differ with regard to personality. As discussed elsewhere (Petty & Cacioppo, 1986), one of the important goals in the development of the ELM was gaining an understanding of how different factors may be related to the persistence of attitudes—in other words, the extent to which attitude changes maintain over time (Petty, 1977). In short, attitudes developed or changed via the central route are predicted to decay slower than evaluatively similar attitudes formed via the peripheral route. As noted earlier, the prediction of greater persistence of attitudes formed or changed via the central route is based on a number of factors related to greater message elaboration and on-line processing (Hastie & Park, 1986) under the central route. Thus, for example, issue-relevant elaboration may result in greater integration of new arguments or personal translations of information into the underlying belief structure (or schema) for an attitude object. In addition, the process of elaboration may allow new information and feelings to come into contact with more points of existing information, enhancing the likelihood that the idiosyncratic elaborations and information supporting the attitude will not be forgotten or disassociated as quickly.

As noted earlier, Cacioppo et al. (1986) were able to demonstrate that attitudes expressed by high-NC individuals were more predictive of behavior than were the attitudes expressed by low-NC individuals. However, it is important to note that the attitudes expressed by high- and low-NC individuals in this study were not developed under experimental control and that subjects were free to be exposed to information about the candidates during the 8-week period following initial attitude assessment and before the behavioral assessment. Because of constant exposure to information about candidates (both arguments and cues) as the election approached, there may have been little opportunity for differential attitude decay. Indeed, Cacioppo et al. reported no differential attitude changes over

² Predictions of differential attitudinal consequences have also been made for individuals differing in self-monitoring. DeBono and Harnish (1988), for example, found that high self-monitors processed the arguments presented by attractive sources more extensively than the arguments presented by expert sources. Low self-monitors did the opposite. Given these results, DeBono and Harnish employed the ELM to predict that the attitudes of high self-monitors exposed to attractive sources would be more persistent and predictive of behavior than the attitudes of high self-monitors exposed to expert sources (and vice versa for low self-monitors). Although these speculations remain untested, they are consistent with the kinds of predictions made in the present research.

time in the high- and low-NC groups. It is possible, however, that if constant advertising and election material were not present in the environment, the newly formed or changed attitudes of low-NC individuals would have decayed back to preelection campaign levels to a greater extent than the attitudes of high-NC individuals.

Study 1 was conducted to examine the hypothesis that newly formed attitudes of high-NC individuals will decay less over time than evaluatively similar attitudes formed by low-NC individuals. To accomplish this, college students were exposed to a series of television advertisements for unknown brands of products in an initial laboratory session. Because a fictitious brand of product was used, subjects would need to form an initial attitude during the first experimental session and would not be exposed to additional information about the brand outside of the laboratory setting. When participants returned to the laboratory two days later—expecting to view additional advertisements—attitudes toward brands advertised in the initial session were assessed. On the basis of the conceptualizations presented in the ELM and on previous research on the need for cognition construct showing that the attitudes of high-NC individuals change as a result of central route processes, whereas the attitudes of low-NC individuals are more likely to change as a result of peripheral route processes, it was hypothesized that the newly formed attitudes of high-NC individuals would decay less than the newly formed attitudes of low-NC individuals.

Method

Forty-six undergraduates participated in a 2 (high NC vs. low NC) \times 2 (immediate vs. delayed attitude) mixed-design experiment for extra class credit. Participants were told that the study was being conducted by the departments of psychology, marketing, and journalism to obtain ratings of some video advertisements. They were further told that because of the large number of ads to be rated, a second session would be held 2 days later.

Materials. A television advertisement for a telephone answering machine called the "Messenger" was the focus of the study. A specially produced 1-min advertisement was created and pretested to have sufficiently strong arguments and positive peripheral cues to create the same (evaluatively identical) initial attitude in both high- and low-NC individuals. In the ad, a telephone answering machine was shown and a long list of features was displayed on the television screen while an announcer described the features. Various visuals were interspersed during the ad to emphasize the machine's features.

On the basis of previous research (e.g., Axson et al., 1987; Petty & Cacioppo, 1984; Wood, Kallgren, & Priesler, 1985) and pretesting, it was expected that the sheer number of features presented to subjects would serve as a positive peripheral cue for low-NC individuals. Also, on the basis of pretesting it was predicted that the merits of the attributes of the answering machine (adapted from a list of features from a brand name machine) would serve as strong arguments for the high-NC individuals. The features mentioned in the ad included remote message retrieval, use of standard audiocassettes, one-touch operation, remote turn on, call screening, variable length announcement, voice-activated recording, extension phone control, automatic save, fast forward/rewind, and a 3-year warranty. The telephone answering machine ad was inserted into a television program along with 11 other student-produced advertisements with professional editing equipment. Content of the ads was quite varied (e.g., ads promoting tourism, a sporting event, a newspaper, a local restaurant, a study lamp, and so forth).

Procedure. Subjects participated in groups of up to 6 people in private cubicles that restricted visual contact. Because subjects listened to the presentations via headphones throughout the session, verbal contact was also restricted. Two 21-inch (53.34 cm) Sony Trinitron television monitors were positioned approximately 5 ft (1.52 m) in front of each set of three cubicles. To make the room comfortable and inviting, each desk was illuminated by a dimmed incandescent bulb via a flexible lamp attached to the cubicle dividers. No overhead lights were used.

Subjects were exposed to four groups of advertising messages embedded in the context of a television program on the history of the American Indian. The advertising segments appeared 2 min after the beginning of the show, 15 min after the beginning of the show, and 28 and 37 min after the beginning of the show. The first 2 commercial interruptions contained three advertisements, the third segment contained four advertisements, and the final group contained two advertisements. Each set of ads was followed by a 4-min blank screen during which subjects were instructed to complete a questionnaire packet. The critical answering machine ad was presented last in the second group of ads viewed. To maintain the cover story and deflect special attention away from the critical ad, subjects completed questions for each of the filler advertisements as well as the critical ad.

The first few questions on each advertisement rating form focused on subjects' attitudes toward the product or issue presented in the ad. Participants were informed that this was necessary because "opinions about the products contained in the ad may influence (your) rating of the ad." Remaining questions asked subjects to express their opinions about the overall quality of the advertisement, how much effort they put into thinking about the product when watching the ad, and other general questions consistent with the cover story. The initial attitude measure for the answering machine consisted of the average of three ratings to the statements (a) the Messenger is a good answering machine, (b) the Messenger has desirable features, and (c) the Messenger answering machine is appealing to me. Ratings were made on three 9-point *strongly disagree–strongly agree* scales ($\alpha = .87$).

Two days after initial exposure to the advertisements, subjects returned to the laboratory expecting to view and rate additional ads. Instead, they completed a questionnaire assessing their attitudes for some of the products advertised in the earlier session. Attitude toward the answering machine was assessed by averaging the responses to three highly related ($\alpha = .91$) 9-point scales (*unappealing–appealing*, *bad–good*, and *negative–positive*).³ In addition, subjects were given 2 min to list the thoughts they had about the answering machine product that was featured in the advertisement they viewed in the earlier session.

³ To ensure the equivalence of the different forms of attitude questions, we presented a separate group of subjects ($n = 105$) with a print version of the telephone answering machine ads and then asked them to complete a brief questionnaire in which they expressed their attitudes toward the answering machine. The first set of attitude questions was identical to those used in the first session of the study. After completing some additional items, questions identical to those used in the delayed setting were given to subjects. Results of this separate study revealed no scale differences, no NC differences, and no interaction. In addition to examining the mean scores, reliability of the measures was also examined. Coefficient alpha for the first measure was .90. Coefficient alpha for the second measure was .89. Coefficient alpha for an entire 6-item scale is .90. The correlation between the two forms of the attitude measure was .75 and was not different for high- and low-NC subjects. In addition to the strong results from the reliability analyses, we conducted a factor analysis of the six items. As expected, a single factor on which all of the items loaded strongly emerged. Thus, the pre- and postattitude questionnaires can be considered equivalent forms of measurement.

sion. They were then given 2 min to recall as much information as they could about this ad. Finally, subjects completed the 18-item version of the Need for Cognition Scale (Cacioppo et al., 1984) and were thanked, debriefed, and dismissed.⁴

Cognitive responses were scored into positive thoughts about the product, negative thoughts about the product, and neutral thoughts by two judges blind to subjects' NC scores. Recall was scored with regard to matching the list of attributes read and displayed on the television screen during the advertisement. Judges agreed on the cognitive response ratings in over 80% of the cases. Disagreements were resolved by discussion. Judges agreed in 100% of the cases in coding of the recall data.⁵

Results and Discussion

Attitudes. Individuals were categorized as high or low in need for cognition by a median split (low NC $M = 55$, range = 35–63; high NC $M = 74$, range = 64–85). A 2 (low vs. high need for cognition) \times 2 (immediate vs. delayed attitude measurement) mixed-design analysis of variance (ANOVA) revealed a significant effect for time of measurement, $F(1, 44) = 21.29$, $p < .0001$, and the predicted interaction, $F(1, 44) = 6.34$, $p < .015$. As expected based on the pretesting of the ad, the attitudes of high- and low-NC individuals were statistically comparable immediately after the presentation of the advertisement (HNC $M = 7.07$, $n = 22$ vs. LNC $M = 6.90$, $n = 24$), but as depicted in Figure 1, attitudes of high-NC individuals decayed less over a 2-day period than did the attitudes of low-NC individuals (HNC $M = 6.76$, $n = 22$ vs. LNC $M = 5.82$, $n = 24$). Simple main effects tests revealed no differences by NC in the initial session, $F(1, 45) = .65$, and significant differences by NC in the delayed session, $F(1, 45) = 19.42$, $p < .01$.

Consistent with the hypotheses, the postmessage attitudes of high-NC subjects decayed less over a 2-day period than the attitudes of low-NC subjects. These findings show explicitly that even though two individuals may possess evaluatively similar attitudes immediately after exposure to a persuasive appeal, personality factors play an important role in determining the extent to which these attitudes persist. These results suggest that once their attitudes have been formed, high-NC individuals may need less frequent exposure to persuasive materials than low-NC individuals to maintain them.

Thought measures. If high-NC subjects engaged in more thinking than low-NC subjects about the strong arguments presented in the initial message, more thoughts about the product might be available at the delayed session. Consistent with this reasoning, at the delayed testing, high-NC individuals listed an average of 1.09 positive thoughts about the product, whereas low-NC individuals reported an average of .33 positive thoughts, $F(1, 45) = 15.14$, $p < .0001$. However, because this measure was taken at the second session (see footnote 5), this difference could either represent cognitive differences that were present at the first session and maintained over time or differences that emerged over time. In any case, even though high-NC and low-NC subjects had similar initial attitudes about the product, high-NC individuals had more favorable cognitions associated with their attitudes at the delayed session than did low-NC individuals. Importantly, for high-NC individuals, the number of positive thoughts available at the second session predicted attitudes ($r = .48$, $n = 22$, $p < .05$). For low-NC individ-

uals, attitudes were not correlated with thoughts ($r = .08$, $n = 24$, ns). No significant differences were revealed between low- and high-NC individuals with regard to the number of neutral product thoughts listed, and no negative thoughts were listed by subjects.

A self-report measure of cognitive activity was taken at the initial session. Subjects were asked to indicate on 9-point scales the extent to which they thought about the product while viewing the advertisement. The scales were anchored at *very little* thought and *very much* thought. High- and low-NC individuals reported similar amounts of thought. The lack of difference may reflect impression management concerns on the part of low-NC subjects or may have resulted from the fact that low-NC individuals thought about different aspects of the message than high-NC individuals (i.e., cues rather than arguments). Nevertheless, to obtain evidence of thoughtful mediation of attitude persistence, the self-reported thought measure (administered in the initial session) was correlated with the extent of attitude decay over time (decay is defined by subtracting the delayed attitude from the initial one). Theoretically, higher amounts of issue-relevant thought during the initial session should lead to less decay of the attitude. The analyses revealed a significant negative correlation (i.e., greater thinking is associated with less decay) for high-NC individuals ($r = -.44$, $n = 22$, $p < .05$) and a nonsignificant correlation for low-NC individuals ($r = .23$, $n = 24$, ns). That is, even though the mean amount of product thought reported immediately after the advertisement was similar for the high-NC ($M = 6.77$, $n = 22$) and low-NC individuals ($M = 6.08$, $n = 24$), the self-reported amount of thought about the product was a reliable predictor of attitude persistence only for high-NC individuals. This is presumably because the thoughts of the high-NC individuals included critical evaluation of relevant attribute information, whereas low-NC individuals may have simply been reporting the fact that they thought about the sheer amount of product information and attributes or other peripheral features.

To examine the validity of our speculation that high- and low-NC individuals focused on different aspects of the initial persuasive message, the cognitive response and recall data were examined for any comments regarding the amount of information or number of product attributes conveyed in the advertisement (i.e., the peripheral cue incorporated into the ad). Supporting the idea that the judgments of low-NC individuals were

⁴ The Need for Cognition scale consists of 18 items for which subjects rate on 5-point scales the extent to which various statements are characteristic of themselves. One half of the items are reverse-scored. An example item includes, "Thinking is not my idea of fun" (reverse-scored). Scores on the scale can range from 18 (low) to 90 (high).

⁵ Cognitive response and recall data were collected at the end of the second session rather than in the first session because it was felt that collection of these measures in the immediate situation would have influenced the decay of the attitudes. That is, we were concerned that the process of listing thoughts and recalling product arguments would artificially induce elaboration among low-NC individuals that did not naturally occur at the time of message exposure. In fact, in pilot testing we were unable to produce significantly different degrees of persistence (or resistance) for high- and low-NC individuals when a thought-listing task immediately followed an initial persuasive message.

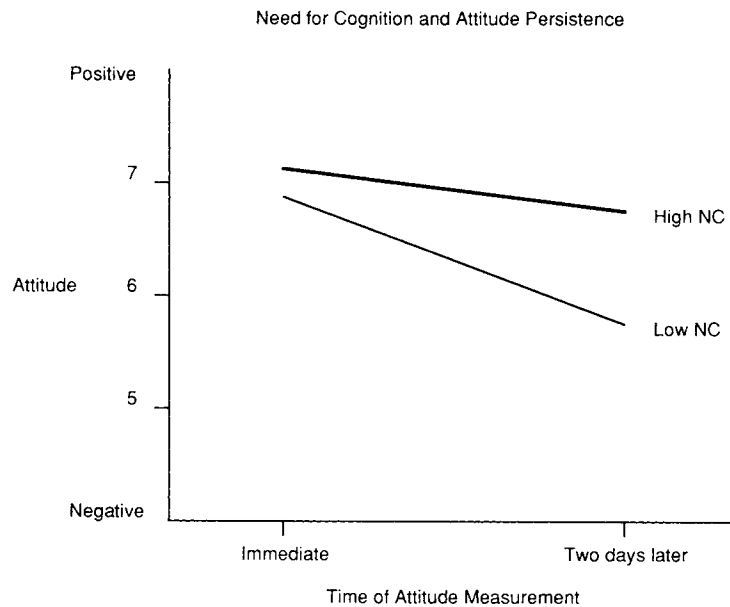


Figure 1. Need for cognition and attitude persistence. (NC = need for cognition.)

based more on the quantity rather than the quality of information presented was the finding that 54% (13 of 24) of low-NC individuals wrote at least one comment referring to the number of attributes featured in the ad or how many features the product possessed. In contrast, only 13.6% (3 of 22) of high-NC individuals wrote comments of this type, $\chi^2(1, N = 46) = 8.31$, $p < .01$. Instead, their comments focused on evaluations of specific product features. These results are consistent with the view that the basis for the initial product judgments of low-NC individuals may have been on the quantity of features rather than on an evaluation of the quality of those features.

Argument recall measure. High- and low-NC individuals correctly recalled similar numbers of product attributes 2 days after exposure to the advertisement (high-NC $M = 1.90$, low-NC $M = 1.75$), and delayed recall was not a reliable predictor of decay for either group (low-NC $r = -.09$, *ns*; high-NC $r = .33$, *ns*). However, consistent with previous research and theory indicating that verbatim recall should be correlated with delayed judgments when the likelihood of on-line message processing is low but not when it is high (Hastie & Park, 1986; Mackie & Asuncion, 1990), delayed recall of the positive product attributes that were presented in the persuasive message was correlated with delayed attitudes for low-NC individuals ($r = .49$, $p < .05$) but not for high-NC individuals ($r = .20$, *ns*). As noted earlier, for high-NC individuals, delayed attitudes were predicted by their favorable thoughts about the product.

At least two possible explanations for the pattern of recall results are worthy of future research. The typical explanation of a positive recall and judgment correlation for a group of subjects who did not engage in processing during message exposure is that the product judgments expressed are based on subjects' current evaluations of what they could recall about the product in the delayed session (i.e., a memory-based judgment; see Hastie & Park, 1986). Because high-NC subjects engaged in

on-line processing in the earlier session, their judgments are based on the thoughts provoked by the message.

A second explanation for the positive delayed recall/delayed attitude correlation in the low-NC group centers around the idea that low-NC individuals may have simply used the number of arguments they recalled as a cue to the merit of the product. The more information recalled, the greater the perceived merit. To examine whether low-NC subjects used the mere number of arguments recalled at the second assessment as a cue or whether they evaluated these arguments at the delayed testing, one could manipulate the quality of the attributes for the product in a study similar to the current one (Haugtvedt, 1992). If low-NC subjects base their delayed attitude on an evaluation of the attributes they can recall, low-NC subjects recalling the weak arguments should exhibit a significant negative correlation between delayed recall and delayed attitude (i.e., recall and evaluation of more weak arguments should lead to a more negative attitude). Low-NC subjects recalling a similar number of strong arguments should exhibit a positive delayed recall and delayed attitude correlation (i.e., recall and evaluation of more strong arguments should lead to a more positive delayed attitude). On the other hand, if low-NC individuals tend to react only to the sheer number of recalled attributes, similar positive delayed recall and delayed attitude correlations should be observed in both the strong and weak argument cases.

Summary

The results of Study 1 supported the hypothesis that individual differences in personality are related to differential persistence of attitude changes. Even though high- and low-NC individuals formed similarly favorable attitudes about a product following a persuasive message, the favorable attitudes of high-NC individuals persisted over time to a greater extent than the

attitudes of low-NC individuals. In a delayed testing, high-NC subjects had greater cognitive support for their opinions than low-NC subjects. The delayed attitudes of low-NC subjects were based on the number of attributes they could recall at the delayed testing rather than their thoughts about the attributes. The latter effect has been associated with failure to evaluatively process information during initial exposure.

Study 2: Need for Cognition and the Resistance of Judgments

In Study 1 we found that the newly formed attitudes of high-NC individuals persisted longer than the newly formed attitudes of low-NC individuals. In addition, persistence of attitudes was related to the amount of self-reported thought about the product for high- but not low-NC individuals. Study 1 was unique in that we were able to track the development and decay of individual attitudes over time in a situation in which additional exposure to information about the attitude object was restricted because of the use of a fictitious product as the target of the persuasive appeal. In the following study we examine a related yet distinct dimension of attitudes and beliefs—the resistance of a new belief to change in the face of a counterattitudinal advocacy.

In our first study, a comparison of attitudes expressed in an immediate and a delayed situation was made to assess the decay of newly formed attitudes. *Persistence*, then, was operationally defined as the tendency for a positive attitude to maintain its favorability over time in the absence of any attack. Attitudinal *resistance* refers to the ability of an attitude to maintain itself in the face of an attack. Research on the resistance of attitudes was especially active in the 1960s.

Initially drawing on the learning theory approach, McGuire (1964) sought to explicitly discern the ways in which the attitudes already held by individuals could be strengthened and made resistant to counterpersuasion. McGuire's (1964) pioneering inoculation theory is the best known attempt at conceptualizing the processes involved in creating resistance to persuasion. McGuire (1964) proposed that creating resistance could be likened to a biological immunization process in which individuals are preexposed to a mild dose of a virus. As a result of preexposure, the individual would be ready for a later, larger attack. Inoculation theory focused on "cultural truisms" or widely accepted attitudes and beliefs that a "person has seldom, if ever, heard attacked" (McGuire, 1964, p. 201).

McGuire's (1964) program of research consisted of testing a variety of pretreatments designed to convince subjects that their attitudes could be attacked and providing them with supportive information for their attitudes (supportive defense) or showing them how to refute persuasive attempts against their attitudes (inoculation defense). The results of this research showed that both inoculation and supportive defenses conferred resistance to counterpersuasive messages, although the inoculation defense was significantly more effective than the supportive defense (e.g., McGuire & Papageorgis, 1961; Sawyer, 1973).

Predictions about the relative resistance of attitudes or beliefs formed as the result of exposure to a persuasive message can also be derived from the ELM. The ELM's central route is

largely based on the cognitive response approach to attitude change. As such (and consistent with much of McGuire's, 1964, work), an individual's natural idiosyncratic cognitive responses are hypothesized to play an important role in the formation and maintenance of attitudes and beliefs. Although McGuire's research focused on training individuals how to respond to counterattitudinal attacks, the ELM predicts that individuals whose attitudes are initially formed or changed via the central route would naturally resist the influence of an attack because they would be able to marshal their own initial cognitive responses to defend their viewpoint. When attitudes are formed or changed via the peripheral route, however, subjects would be relatively less able to marshal a defense of their initial opinions. Thus, factors that enhance the likelihood of initial attitude formation or change via the central route should generally enhance the ability of the attitude to resist influence from a second countercommunication (Wu & Shaffer, 1987). Because previous research has shown that high-NC individuals are more likely to follow the central route to persuasion, their initial attitudes and beliefs should be more likely to be maintained in the face of an attack than the attitudes of low-NC individuals.⁶ Although some personality variables have been linked to general resistance to influence (e.g., dogmatism), no previous research has examined personality moderators of the ability of newly formed beliefs to resist a counterpersuasive attack.

Thus, the primary purpose of our second experiment was to examine the resistance of beliefs formed by high-NC and low-NC individuals. To examine this, we exposed high- and low-NC subjects to an initial message that strongly questioned the safety of a popular food additive. As in Study 1, the message was designed to contain strong arguments and positive cues. On the basis of pretesting, high- and low-NC individuals were expected to form similarly unfavorable attitudes toward the food additive following exposure to this message. A few minutes later, the original message was followed by a countermessage in support of the food additive. Our hypothesis was that the attitude change of high-NC individuals following an initial message would prove more resistant to the effects of an attacking countermessage than would the attitudes of low-NC individuals.

Method

Fifty-one undergraduates participated in a 2 (low vs. high need for cognition) \times 2 (initial message vs. countermessage) mixed-design experiment for extra class credit. Early in the school session, the need for cognition instrument (Cacioppo et al., 1984) was administered along with a variety of other questions. Individuals scoring in the top and bottom 30% of the NC distribution were recruited via telephone to participate in the study. The mean score of subjects categorized as low NC was 53 (range = 27–59) and the mean score of subjects categorized as high NC was 79 (range = 76–86). The average NC score from the distribution from which these subjects were recruited was 65.3. Unlike Study 1 where the topic was an unfamiliar brand of product, subjects in

⁶ One likely exception to this generalization would occur if the countermessage contained very strong arguments but was associated with negative peripheral cues. In this case, the low-NC individuals would presumably reject the countermessage based on the negative cues, but the high-NC individuals would show relative acceptance based on the very strong arguments.

the current study would likely have held initial opinions about the topic of the persuasive communication—a popular food additive. Thus, an initial assessment of opinions on the topic was undertaken during the prescreening to assure similar beliefs among the high- and low-NC groups.

Procedure. On arrival at the laboratory, subjects were told that they would be reading excerpts from various publications and then asked to evaluate them on a variety of dimensions. The subjects were asked to read the excerpts as they would articles in newspapers or magazines. All of the instructions, messages, and questionnaires were administered via Macintosh SE computers using the application software HyperCard. Six to 8 subjects participated in each 30-min laboratory session. Subjects were allowed to complete the computer portion of the study at their own pace. To orient the subjects to the use of the computer, two brief practice questions (e.g., asking subjects the extent to which they liked the Macintosh computer) were presented immediately after the experimental instructions. Following the practice question, subjects read the first message and responded to the key dependent measures. Then they read the countercommunication and responded to additional items. Finally, the subjects were debriefed, thanked, and dismissed.

Messages and measures. Although subjects were not given any expectation as to the number of excerpts to be read and evaluated, only two messages were used in the study. Before the presentation of the first excerpt, a "title page" containing the title of the article, information about the author, and the publication source and date were presented. The first message, titled "Ban [Brand Name of Food Additive] Now!" was attributed to a Dr. James Dobbs, Professor of Food Sciences at Princeton University. The bottom of the title page also indicated that the article had appeared in the *New England Journal of Medicine* on July 23, 1988. In a supposed excerpt from the message, Dr. Dobbs strongly questioned the safety of a popular food additive (used as a sweetener). The message was based on materials appearing in the popular press. Dr. Dobbs reported the results of research linking common physical ailments to consumption of the product and suggested that because of a loophole in federal classification systems, government studies on the long-term effects of using the food additive have not and are not likely to be conducted. The excerpt ended with a request by Dr. Dobbs to concerned colleagues to join him in protest.

After reading the first excerpt (consisting of two computer screens of information), subjects were presented with a series of questions about the excerpt in a sequential fashion. All questions were answered by clicking on buttons at the bottom of the computer screen numbered from 1 to 7. After some preliminary questions (e.g., assess the writing style of the author), the critical belief question asked subjects to rate the safety of the food additive on a scale of 1 (*not very safe*) to 7 (*very safe*). The next few questions assessed the importance of the product to the individual and the frequency of consumption. To obtain some possible correlates of differences in the nature or basis of subjects' postmessage beliefs, ancillary measures assessed subjects' perceptions of the author's expertise, the amount of information contained in the message, and the confidence with which they held their opinions about the safety of the product.

After completing the questionnaire for the first message, subjects were presented with another title page introducing the next excerpt. The same format as used in the first message was followed. The second excerpt was titled "And Crossing the Street is Dangerous Too: A Response to Dobbs" and was attributed to a Dr. William C. Manchester, Professor of Nutrition at Cornell University. The bottom of the title page indicated that the article appeared in the *New England Journal of Medicine* on August 23, 1988. In the excerpt, Dr. Manchester stated that he disagreed with the views expressed by Dr. Dobbs and suggested that evidence justifying a ban of the product has not been convincingly presented. He then noted that Dr. Dobbs had unjustifiably attacked

what may be a good consumer product and that because he has not personally heard any complaints from consumers, he believed that no harmful side effects had been demonstrated. The same question about the safety of the food additive as was presented after the first message appeared after subjects read the countermessage.

After all subjects completed the computer portion of the study (which took 8–12 min), the experimenter presented subjects with a paper questionnaire designed to assess cognitive responses and recall of message arguments. Subjects were asked to write down all of the thoughts that they recalled thinking as they read the first (antiprodukt) message. Eight 6-in. (15.24 cm) lines spaced $\frac{1}{2}$ -in. (1.27 cm) apart were provided for responses and 2 min were allowed for the task. On the bottom half of the same page, subjects were then asked to write down all of the thoughts they could recall having as they read the second (proproduct) message. Again, eight lines were provided and 2 min were allowed for the thought listing. On the top half of the following page subjects were asked to write down as many of the statements made in the antiprodukt article as they could recall. On the bottom half of the same page, they were asked to write down as many of the statements made in the proproduct article as they could remember.

Two judges blind to the subjects' NC scores coded thoughts about each message into positive, negative, and irrelevant categories (cf. Petty & Cacioppo, 1979). In addition, they coded recall of each message by assessing whether the information listed corresponded to the message that appeared on the computer screen. Initial ratings by the judges were in agreement in over 70% of the cognitive responses coded and over 90% of the recall items coded. Discrepancies were resolved by discussion.

At the conclusion of the study, subjects were thoroughly debriefed about the fictitious nature of the sources and were informed that the messages were actually developed for the current study based on materials of unknown reliability appearing in the popular press.

Results

Belief measures. As previously noted, as part of the prescreening questionnaire administered at the beginning of the school session, subjects responded to a question about the safety of the food additive that was the focus of the current research. In the initial laboratory session, all subjects again expressed their beliefs about the safety of the product immediately after reading the initial message arguing that the product was unsafe. A 2 (high NC vs. low NC) \times 2 (premessage vs. postmessage) repeated measures ANOVA revealed a main effect for the pre–post message factor, $F(1, 49) = 31.62, p < .0001$, and no interaction with NC, $F < 1$. Mean preexisting safety beliefs were 5.0 and 4.89 for the high-NC and low-NC groups, respectively, $F < 1$. Mean safety beliefs expressed after the antiprodukt message were 3.75 and 3.81 for the high-NC ($n = 24$) and low-NC ($n = 27$) groups, respectively, $F < 1$. Thus, the preexisting beliefs of high-NC and low-NC individuals were equivalent and the antiadditive message was equally effective in changing both high- and low-NC subjects to be less favorable toward the safety of the food additive.

Next, we compared subjects' beliefs expressed after the initial antiadditive message with beliefs expressed after the subsequent proadditive message using a 2 (high NC vs. low NC) \times 2 (post-antimessage vs. post-promessage) repeated measures ANOVA. This analysis revealed the predicted interaction, $F(1, 49) = 19.38, p < .0001$ (see Figure 2). As previously noted, there were no differences between high-NC and low-NC individuals after the initial antiadditive message. However, a significant

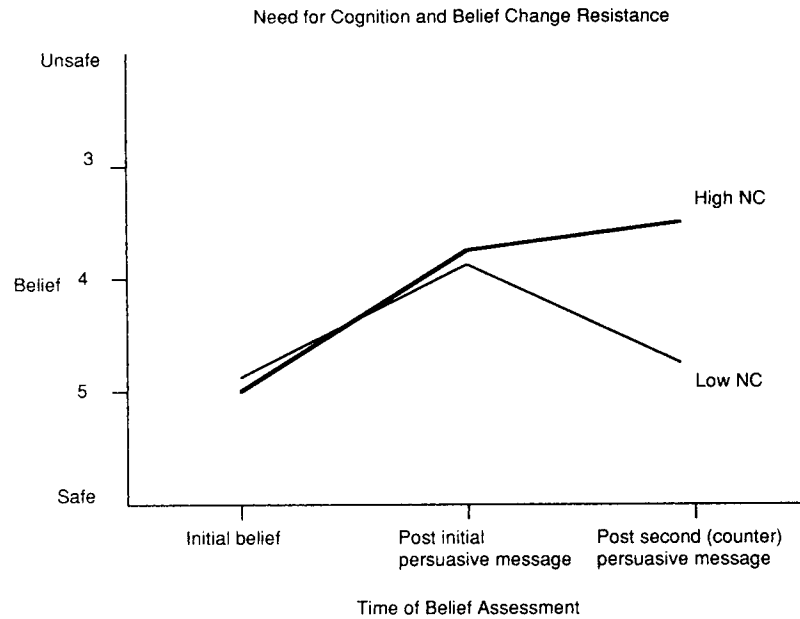


Figure 2. Need for cognition and belief change resistance. (NC = need for cognition.)

difference between high-NC and low-NC individuals emerged in beliefs expressed after the proadditive message, $F(1, 49) = 12.66, p < .001$. After the proadditive message, the mean safety rating of the high-NC group was 3.42 and the mean safety rating for the low-NC group was 4.7. As predicted, the newly changed beliefs of low-NC individuals were more susceptible to the counterattacking message than were the newly changed beliefs of high-NC individuals.

Recall and thought measures. The relative lack of resistance exhibited by the low-NC individuals in the present study is presumably due to the fact that their processing of the initial antiadditive message was less extensive than that of high-NC individuals. Some support for this idea comes from an examination of the recall of message arguments. As in some previous research assessing recall immediately after message exposure (e.g., Cacioppo et al., 1983), high-NC individuals recalled significantly more message arguments than did low-NC individuals from both the antiadditive (high-NC $M = 3.7$, low-NC $M = 2.3$), $F(1, 49) = 15.6, p < .0001$, and the proadditive messages (high-NC $M = 2.42$, low-NC $M = 1.89$), $F(1, 49) = 4.28, p < .05$. Greater recall of the message arguments may reflect greater elaboration of them (cf. Craik & Lockhart, 1972).⁷

Although subjects did not differ in the profile of thoughts listed to the initial (antiadditive) persuasive message, they did differ in response to the subsequent (proadditive) countermessage. Specifically, consistent with the hypothesis that high-NC subjects would be better able to defend their attitudes, high-NC individuals engaged in greater counterargumentation of the second message ($M = 1.58$) than did low-NC subjects ($M = .48$), $F(1, 49) = 12.90, p < .001$. Interestingly, the number of negative thoughts generated in response to the second message was positively correlated with the number of arguments recalled from the first message for high-NC individuals ($r = .47, n = 24, p < .05$), but not for low-NC individuals ($r = .21, n = 27, ns$). Because

greater recall of the first message may reflect greater processing of it, this correlation is consistent with the idea that the more high-NC individuals thought about the initial message, the more they were able to counterargue the second one.

Ancillary measures regarding the initial message. Analyses of responses to the ancillary questions about the first message revealed few differences.⁸ Specifically, high-NC and low-NC individuals did not differ in their self-reports of the confidence with which they held their initial beliefs, nor in their reported frequency of product consumption or in the perceived importance of the product. Although high-NC individuals perceived the source of the message as slightly more expert (high-NC $M = 4.6$, low-NC $M = 4.3$), $F(1, 49) = 6.08, p < .02$, than low-NC individuals, both high-NC and low-NC individuals perceived the message to contain the same amount of information. Some interesting patterns in the correlations among these measures surfaced, however. Specifically, confidence (or strength) in beliefs following the first (antiadditive) message was correlated with perceived source expertise for low-NC individuals ($r = .50, p < .01$) but not for high-NC subjects ($r = -.27, ns$). In addition, confidence was related to the sheer amount of information subjects felt the message contained for low-NC individuals ($r = .61, p < .01$) but not for high-NC individuals ($r = .18$). This suggests that the strength of the initial opinions of low-NC subjects was based on the extent to which the position was associated with positive peripheral cues. In contrast, ability to recall the argu-

⁷ In study 1, high-NC and low-NC individuals showed equivalent recall of the message on a measure taken 2 days after exposure. Previous research demonstrating differences in recall between high-NC and low-NC individuals (e.g., Cacioppo et al., 1983) has assessed recall shortly after message exposure (as in the current study).

⁸ Only perceived expertise was assessed with respect to the second message. No significant effects were observed on this measure.

ments in the first message was related to attitudinal confidence for high-NC individuals ($r = .32, p < .06$) but not for low-NC individuals ($r = -.12, ns$). That is, for high-NC subjects, strength of opinion was based on the extent to which it was supported by the evidence contained in the message.⁹

Summary

The results of Study 2 revealed that even though exposure to an initial message arguing that a product was unsafe influenced the beliefs of low-NC and high-NC individuals to the same degree, exposure to a subsequent message advocating the product's safety led to different responses by low-NC and high-NC individuals. Whereas high-NC individuals tended to engage in active counterargumentation and were relatively uninfluenced by the attacking message, low-NC individuals agreed with the direction of the second message and moved back toward their initial, preexperimental beliefs that the product was safe. Study 2 also showed that although high-NC and low-NC individuals reported similar levels of confidence in their initial opinions, strength of opinion was based on different things. For low-NC subjects, confidence was based on the perceived expertise of the source and the sheer amount of information that the message contained (similar to Study 1). For high-NC subjects, confidence in opinion was based on the number of substantive message arguments that they could recall. Importantly, the more arguments that high-NC individuals could recall from the first message, the more they counterargued and resisted the second one. In contrast, beliefs based on source credibility or perceptions of the sheer amount of information in the message were unsuccessful in rendering the beliefs of low-NC individuals resistant to the attacking message.

General Discussion

The current studies provided the first evidence that a personality variable—need for cognition—could moderate the persistence and resistance of newly formed or changed attitudes. Although high-NC and low-NC individuals developed similar positive attitudes (Study 1) or similar negative beliefs (Study 2) following an initial persuasive communication, attitudes and beliefs of the high-NC individuals exhibited greater persistence over time (Study 1) and greater resistance to an immediate countermessage (Study 2). Previous studies on need for cognition had shown that high- and low-NC individuals can form the same attitude by different processes. The current research is unique in that it shows that these attitudes, though similar in valence, have quite different properties.

It is important to note that we do not believe the pattern of results presented here will be universal. For example, low-NC individuals can be motivated to elaborate on message content, though they are not naturally inclined to do so (e.g., Axsom et al., 1987). If low-NC individuals do engage in extensive elaboration at the time of initial message exposure, their attitudes may be just as persistent as the attitudes developed via elaboration by high-NC individuals. On the other hand, if a persuasive appeal does not contain sufficient information on which to evaluate the merits of a product or position or if insufficient time is available, high-NC individuals may base their attitudes on pe-

ripheral aspects and thus show decay equal to that of low-NC individuals.¹⁰

In addition to differences in persistence, we have shown that under certain circumstances, the beliefs formed by high-NC individuals will be more resistant to change than the beliefs formed by low-NC individuals. In this research we specifically designed the countermessage to contain positive cues but arguments that on evaluation would prove susceptible to counterarguing. Theoretical notions suggest that if the cue in the countermessage had been negative (e.g., a low-credible source), but the arguments presented were quite strong, beliefs of low-NC individuals may have appeared to be more resistant to change than those of high-NC subjects (see footnote 6). That is, low-NC individuals would have been resistant because of rejection of the negative peripheral cues associated with the countermessage, and high-NC individuals would have lacked resistance because of succumbing to the strong arguments presented. However, it is important to note that the resistance of low-NC individuals and the lack of resistance of high-NC individuals in the case just described would be quite different. Low-NC individuals would tend to handily and quickly reject the message on the basis of the negative cues presented, whereas high-NC individuals would be expected to deliberate and struggle with a second message containing cogent arguments against their new beliefs.

As the previous discussion suggests, a number of methodological factors need to be considered in research on attitude persistence and resistance. In the present research, we were careful to ensure that both high-NC and low-NC individuals possessed similar initial attitudes as well as similar levels of interest or involvement in the topics. In addition, in our view, an important methodological requirement for this research was that both high-NC and low-NC groups needed to develop equally extreme attitudes from exposure to the experimental stimuli by the hypothesized processes. Only then were we in a position to examine the critical hypotheses. Numerous other methodological issues also need to be weighed in this kind of research. Consider the choice of delay interval in persistence research, for example. Reassessment of attitudes too soon after exposure to a persuasive appeal might not reveal any differential decay, and reassessment too far removed from an appeal might show that all individuals had decayed back to a premessage exposure level. The important issue, both theoretically and practically, is that differential patterns of attitude decay are likely to exist. It is also important to understand that caution may be needed in obtaining process measures in such research. Additional thinking or reflection induced by having to complete cognitive response or recall measures immediately after exposure to a message might inflate the number and type of associations subjects

⁹ At first glance this result may seem inconsistent with those of Study 1. However, in Study 1, recall of arguments was correlated with the actual delayed opinions of low-NC but not high-NC subjects (i.e., opinions expressed 2 days after message exposure). Here, recall is not associated with the actual opinions of high-NC subjects, but rather the strength of or confidence in their immediate postmessage opinions.

¹⁰ Relatively persistent attitudes may also be formed by repeatedly pairing simple cues with positions so that the cues become quite memorable (Haugtvedt, Schumann, & Schneider, 1991).

have toward the object or issue—above and beyond those they would naturally develop as a result of exposure to a message (see footnote 5). With evidence of differential consequences from the present research, future research should be directed at gaining additional evidence of the processes mediating the observed effects.

In sum, although the processes of attitude persistence and belief change resistance may appear complex and difficult to study at times, the processes can be understood and the operation of specifiable variables can be predicted by existing models of attitude change. Studies like the present ones, in which the nature of initial attitude formation can be controlled, provide a paradigm to study the processes underlying the maintenance of attitudes and beliefs by people with different personality characteristics. For more than 10 years, contemporary models of attitude change (e.g., ELM and HSM) have guided hypotheses regarding the underlying processes of persuasion. The majority of the studies conducted in the past decade, however, have assessed attitudes obtained immediately after exposure to a persuasive appeal or have focused on situational factors that moderate the consequences of persuasion. Results of the present research suggest that the two-route approach to attitude change also possesses considerable potential for gaining understanding of the consequences of attitude change for people who vary in personality traits (cf. Haugtvedt, 1989; Haugtvedt & Strathman, 1990).

Summary

Carlson (1984) wrote that “personality and social psychology appear to be linked mainly by their deficiencies and appear to have little content worth sharing” (p. 1304). In our view, the personality-attitude change approach reviewed and used in the present research challenges such a statement. That is, personality and social psychology can be linked by their strengths through the use of personality-attitude change research strategies. Research along these lines has the potential to contribute to both personality and attitude change theories. For example, we now know that not only are high-NC individuals more intrinsically motivated to think and elaborate than low-NC individuals in persuasion as well as nonpersuasion settings (e.g., Lassiter et al., 1991; Srull et al., 1985), but also that there are important differential consequences of such tendencies—consequences that may not even have been considered without linking the personality variable to attitude change theories.

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