

Field dependence and attitude change: Source credibility can alter persuasion by affecting message-relevant thinking

Martin Heesacker and Richard E. Petty, *University of Missouri-Columbia*, and
John T. Cacioppo, *University of Iowa*

Abstract

The present study shows that for a personally relevant counterattitudinal issue, a highly credible source can alter persuasibility by increasing a subject's message-relevant thinking. Previous failures to show this effect were probably due to the highly thoughtful nature of typical research subjects, when confronted with involving issues. In the present study, field-dependent and field-independent subjects heard convincing or refutable counterattitudinal speeches given by sources of high or low credibility. Results indicated that subjects who are typically low in differentiation of stimuli (field-dependent subjects) showed differential persuasion to strong and weak arguments only when they were presented by a highly credible source. For subjects who are typically high in propensity to differentiate stimuli (field-independent subjects), the arguments were differentially persuasive for both high and low credible sources. These results are consistent with the hypothesis that increasing source credibility can enhance message-relevant thought for subjects who typically do not scrutinize message content.

Early research regarding the effects of source credibility on persuasion found that a speaker of high credibility is more persuasive than is a speaker of low credibility (e.g., Hovland & Weiss, 1951; Kelman & Hovland, 1953). Hovland and his associates attributed this and other persuasion phenomena largely to differences in message learning. According to the model, highly credible sources should facilitate learning, and the better a message is learned, the more persuasive it should be (Hovland, Janis, & Kelley, 1953, p. 10). Hovland and associates had

The present research was presented at the Annual Missouri Psychological Association Convention, Saint Louis, Missouri, May 1982, as the recipient of the 1982 Graduate Research Award, and is based on a masters thesis conducted by the first author. Thanks are extended to Robert H. Dolliver, P. Paul Heppner, and Donald O. Granberg for serving on the thesis committee; to N. Blaine Boatright, Cathie Capshaw, Sarah Garney, Charles Gross, and Mary A. Heesacker for assistance in collecting and coding the data; and to John H. Mueller and Heather A. Tatten for their helpful comments on earlier versions of this manuscript. Requests for reprints should be sent to Martin Heesacker, now at the Psychology Department, Southern Illinois University, Carbondale, Illinois 62958.

Journal of Personality 51:4, December 1983. Copyright © 1983 by Duke University Press.

difficulty providing evidence for this message learning notion, however, and subsequently discussed source credibility from an associational viewpoint. In this second view, high credibility sources were thought to cause increased acceptance of a message because they were associated with favorable outcomes (e.g., being correct). Since favorable associations were related to the source and the source was tied to the message, favorable associations were also related to the message. The result of these favorable associations was thought to be increased persuasion (see Hovland et al., 1953, pp. 38-44).

Though Hovland and associates demonstrated superiority of persuasion for high credibility sources, these effects have not generalized to highly involving issues (Hass, 1981; Johnson & Scileppi, 1969; Petty, Cacioppo, & Goldman, 1981; Rhine & Severence, 1970), or proattitudinal messages (Sternthal, Dholakia, & Leavitt, 1978), or contexts in which the source is identified after the message (Mills & Harvey, 1972; Sternthal et al., 1978). Nor do the attitude changes found by Hovland and associates seem to reflect enduring persuasion (see Cialdini, Petty, & Cacioppo, 1981; Cook & Flay, 1978).

Recent reviews of the attitude literature have questioned the mediational role of learning message content and of associative principles as determinants of enduring persuasion and have emphasized instead the role of a person's own message-relevant thoughts as the central mediator of attitude change (see Cialdini et al. 1981; Eagly & Himmelfarb, 1978; Perloff & Brock, 1980; Petty, Ostrom, & Brock, 1981). This cognitive response view of persuasion has demonstrated superiority over associative and message learning approaches in the explanation and prediction of a variety of persuasion phenomena (e.g., Cacioppo & Petty, 1979; Insko, Lind, & LaTour, 1976; Love & Greenwald, 1978; Petty, Cacioppo, & Heesacker, 1981).

There is supportive, though not definitive, evidence for the notion that source credibility effects may also be mediated by message-relevant thinking in some contexts (see Petty & Cacioppo, 1981, pp. 235-237). The cognitive response approach to source credibility suggests that, depending on the type of message-relevant thinking that predominates, enhanced source credibility might reduce persuasion or interact with other variables to produce data patterns quite different from the simple enhancement effect predicted by the Hovland learning and association models.

For example, Hass (1981) has suggested that when subjects are highly committed to a position, a counterattitudinal message from a highly credible source should elicit increased counterarguing over the same message from a source of low credibility. Hass argues that this occurs because a person's response to a communication is related to the per-

ceived strength (credibility) of the persuasive attack. Since a counter-attitudinal message from a highly credible source poses a stronger attack than does the same message from a source of low credibility, people will be more motivated to counterargue against it. Thus, when a person is highly committed to an issue position, increasing source credibility should reduce persuasion by enhancing counterarguing.

Petty and Cacioppo (1981) have modified the Hass hypothesis by proposing that when an issue is personally involving or relevant, people will be more motivated to think about the information provided by a high than by a low credible source. As an issue increases in importance, people have a greater desire to hold a correct opinion, and evaluating information from an expert is more likely to yield a correct opinion than is evaluating information from a nonexpert. If a highly credible source enhances thinking about the message, then the quality of the arguments in the message should be a more important determinant of postcommunication attitudes for messages presented by high than by low credible sources. In other words, although cogent arguments should generally be more persuasive than specious ones, this effect should be especially evident when the source of the message has high credibility.¹

One of the difficulties in testing either the Hass or the Petty and Cacioppo cognitive response explanation of source credibility effects is that they both are meant to apply only to highly involving issues. This poses a problem because increasing issue involvement enhances message-relevant thinking (Petty & Cacioppo, 1979) and it may be difficult to observe any further increases in thinking (pro or counterarguing) due to credibility if thinking is already maximal due to the involving nature of the issue. In fact, when persuasion studies have employed highly involving issues, manipulations of source credibility have typically had no further impact on attitude change (see Hass, 1981; Johnson & Scileppi, 1969; Petty, Cacioppo, & Goldman, 1981).

One solution to the methodological dilemma (of the ceiling effect in thinking due to involvement) might be to divide typical college student subjects, who may be more cognitive than other people, into those who would inherently tend to distinguish messages on the basis of their quality and those who would be less likely to do so. If such a division were made, subjects who were not so inherently inclined to differentiate different kinds of messages would allow a test of the two cognitive response models of source credibility. Although several cognitive style

1. Although Hass (1981) spoke of issue commitment and Petty and Cacioppo (1981) spoke of issue involvement, Halverson and Pallak (1978) have demonstrated that issue commitment increases ego-involvement (see also Sherif, 1976). Thus, the two concepts appear to have similar psychological consequences, rendering the commitment and involvement research comparable.

variables could be used for determining which subjects were or were not likely to distinguish between different kinds of messages, field dependence/independence was selected for the present study. Field-independent (FI) people are active, hypothesis-testing, participant learners, while field-dependent (FD) people have been characterized as passive, intuitive, spectator learners (Goodenough, 1976). Additionally, FI people have better developed cognitive restructuring skills than do FD subjects (Witkin, Goodenough, & Oltman, 1979).

Taken together, these FD-FI differences suggest that FI subjects should be better at extracting the meaning from persuasive messages than are the FD subjects. The FD subjects, then, might provide an appropriate sample of people on whom to test the cognitive response hypotheses. Additionally, previous research suggests that FD subjects would be more likely to attend to the social features of the persuasion setting, whereas FI subjects would be more likely to extract meaning from the content features of the persuasion setting (Witkin & Goodenough, 1977; Witkin et al., 1979). These differences appear to be due to cognitive style and not to simple differences in learning effectiveness (Goodenough, 1976, p. 681), making message learning an unlikely explanation of any resultant attitude change. In sum, FD subjects should be ideal for testing the cognitive response formulations suggesting that for highly involving issues, a highly credible source should increase message-relevant thought over a low credibility source. FD subjects are capable of thinking a great deal about a message, but are less inherently motivated to differentiate and distinguish content features than are FI subjects. Therefore, the ceiling effect due to involvement that may have generally attenuated source credibility effects in previous research should not be as strong a problem with FD subjects. FI subjects, on the other hand, should naturally be motivated to extract meaning from the involving message and, as in previous research, should fail to show evidence of more thinking under conditions of high than low source credibility.

In the present study, FD and FI subjects were exposed to a source of high or low credibility presenting a convincing (soundly reasoned) or refutable (poorly reasoned) message regarding a highly involving counterattitudinal topic. Since FD and FI subjects do not differ in learning abilities, the Hovland models would expect all subjects to show more agreement with a high than a low credible source. Both of the cognitive response formulations would expect FI subjects (who are naturally differentiating the message) to show *no* effects for credibility, replicating previous research employing high involvement issues (Hass, 1981; Johnson & Scileppi, 1969; Petty, Cacioppo, & Goldman, 1981). However, the two cognitive response formulations differ in their predictions for

FD subjects, who are not naturally motivated to differentiate content stimuli. The Hass (1981) formulation would predict that for this group, increasing the source credibility of a counterattitudinal message would increase counterarguing and thereby reduce persuasion for both strong and weak arguments. The Petty and Cacioppo (1981) formulation would predict that increasing credibility would increase message scrutiny resulting in a greater differentiation of strong from weak arguments.

Method

Procedure

A 2 (Source Credibility: High or Low) \times 2 (Message Quality: Strong or Weak Arguments) \times 2 (FD or FI Subjects) factorial design was employed. The subjects were 354 University of Missouri Introductory Psychology students who received extra credit for participation. Subjects arrived at a language lab and sat in one of 20 booths equipped with audio headphones. The booths restricted verbal and visual contact among subjects.

At each booth was an experiment booklet entitled "Psychology Department Cooperative Communication Project." Subjects read an instruction stating, "The University of Missouri is currently undergoing an academic reevaluation. The new chancellor is seeking recommendations about policy changes to be instituted at the University." By random assignment, some subjects had booklets that described a scholarly report prepared by a high credibility source, while others had booklets that described an editorial opinion by a low credibility source. Subjects were informed that these reports had been developed into several brief audio tapes for possible radio broadcast. "The University has agreed to provide feedback . . . on the professional broadcast quality of the various tapes."

Subjects were then instructed to put on their headphones and listen to the broadcast. Each subject heard a counterattitudinal speech favoring the institution of senior comprehensive exams at the University of Missouri. The editorial recommended that all students be required to pass a test in their major area as a requirement for graduation. At the conclusion of the broadcast, subjects read the following, "Because your own views on the desirability of instituting a comprehensive exam may influence the way you rate the quality of the broadcast, we would like to obtain a measure of how you feel about the idea of a comprehensive exam, before you rate the quality of the broadcast." Subjects then completed five attitude measures and several ancillary items. Next they listed any thoughts they had during the broadcast, and any arguments they could recall from the broadcast. Finally, subjects were administered a paper and pencil test measuring FD/FI, were thanked, debriefed, and dismissed.

Independent Variables

Source credibility. Subjects in the high credibility conditions read that the broadcast was based on a comprehensive, six-month study by the Carnegie Commission on Higher Education and that the tape had been prepared by Dr.

John Samuels, a professor of education at Princeton University. Subjects in the low credibility conditions read that the broadcast was based on a report by a journalism class at a local high school and that the tape had been prepared by John Samuels, a student in that class.

Message quality. The convincing or soundly reasoned message used statistics, logic, and very little anecdotal evidence. For example, one strong message argument for senior comprehensive exams was that the university alumni would be glad to contribute more money to the university, thus keeping tuition down, but wanted some assurance of high educational standards, such as the comprehensive exams, before they would give generously. An example of a weak message argument was that the exams should be instituted because graduate students take comprehensive exams and not to give them also to undergraduates would indicate prejudice, just like racial or religious prejudice. The refutable message contained arguments that were typically illogical and anecdotal (see Petty & Cacioppo, 1979, for a list of the arguments in the convincing and refutable messages).

Field dependence/field independence. Subjects were administered a computer adapted form of the CF-1 Test of Field Dependence (Ekstrom, French, & Harman, 1962). Tests of this type have been shown to be reliable and valid (Jackson, Messick, & Myers, 1964), and this particular test has a test-retest reliability of .82 (Ekstrom, French, & Harman, 1976). For 32 items, subjects are to select the one of five simple figures which is embedded within a complex figure. High scorers (as determined by a median split) were designated as field independent and low scorers were designated as field dependent.²

Dependent Variables

Attitude measure. After hearing the appropriate communication, subjects rated the concept "Senior Comprehensive Exams" on four 9-point semantic differential scales (good-bad, beneficial-harmful, foolish-wise, and favorable-unfavorable). Subjects also responded on an 11-point Likert-type scale to the question, "To what extent do you agree with the proposal requiring seniors to take comprehensive exams before graduating?" Because the intercorrelations among these five measures were so high (range .61-.81, average intercorrelation .72), the scores on these five scales were standardized and averaged to form a single, composite measure of subjects' attitudes.

Cognitive responses and argument recall. Subjects were given 2½ minutes to list the thoughts they had while listening to the broadcast. Next, they were given 2½ minutes to list as many arguments provided in the broadcast as they could recall. A judge blind to experimental condition rated each thought as in favor of

2. The median score in the sample tested was nine items correct. Norms from Ekstrom et al. (1976) indicated that mean scores ranged from 9.2 (for ninth graders) to 15.8 (for 11th and 12th grade males). Because of the present sample's skew toward field dependence ($M = 10.1$), as compared to the norms, it seemed most appropriate to include subjects who scored nine correct with the FD subjects, rather than with the FI subjects. This split resulted in a sample of 191 FD subjects and 163 FI subjects. A pilot test on FI and FD subjects indicated that the groups had the same initial attitudes toward senior comprehensive exams, $F(1,19) < 1$.

the exam proposal, opposed to the proposal, or neutral/irrelevant (see Cacioppo & Petty, 1981). In addition, a judge blind to the credibility manipulation and the subjects' FD/FI scores rated for accuracy each argument recalled by subjects. As a check on the reliability of the judgments, another judge also rated a random sample of subjects' thoughts and argument recall. Correlations between ratings made by the primary and validating judges ranged from .75 to .94 ($p < .0001$, $n = 320$). A general index of cognitive favorability was derived for each subject by subtracting the number of negative thoughts listed from the number of positive thoughts listed.

In order to explore if the thought-listing measure would be sensitive to differences in the extent of message-relevant thinking among the experimental conditions, the subjects' cognitions were rated again, but this time judges blind to FD/FI and source credibility rated the thoughts as dealing with (1) a general assessment of message content (e.g., "The message was really stupid."), (2) content from a particular message (e.g., "Who cares if grad students have to take the exams?"), (3) the issue, but not the message (e.g., "I'm afraid I'd fail the exam."), and (4) something irrelevant to both issue and message (e.g., "I wonder what time it is."). The first two categories code for two different kinds of message-relevant thoughts. Ratings from the primary and validating judges correlated from .91 to .95 ($p < .0001$, $n = 340$).

Results

Attitude Measure

A four-way analysis of variance (High/Low Source Credibility \times Strong/Weak Message \times FD/FI \times Male/Female) yielded two statistically significant effects. First was a main effect for arguments, $F(1,352) = 15.69$, $p < .0001$, showing that subjects were more persuaded by the strong message ($M = .16$) than by the weak message ($M = -.21$). The second significant effect was a three-way interaction between source credibility, message quality and field dependence, $F(1,352) = 4.30$, $p < .05$, which is graphed in Figure 1.³ This interaction was decomposed into separate 2×2 factorials on the data from FD and FI subjects in order to test the specific hypotheses about the two groups. FD subjects showed a main effect for message quality, $F(1,187) = 5.93$, $p < .02$, with attitudes more favorable to the strong message ($M = .12$) than to the weak message ($M = -.19$). However, this main effect was qualified by a source credibility by message quality interaction, $F(1,187) = 3.30$, $p < .08$. A simple effects test of this two-way interaction indicated that

3. A four-way ANOVA on each of the five separate attitude items yielded the following statistics for the three-way interaction of source credibility, message quality, and field dependence: beneficial-harmful $F(1,354) = 1.88$, $p < .18$; foolish-wise $F(1,354) = 5.13$, $p < .03$; unfavorable-favorable $F(1,354) = 3.26$, $p < .08$; good-bad $F(1,355) = 4.16$, $p < .05$; Likert item $F(1,355) = 2.11$, $p < .15$. For all five of the items, the main effect for message quality was highly significant, all $ps < .005$. No other main effects or interactions reached statistical significance.

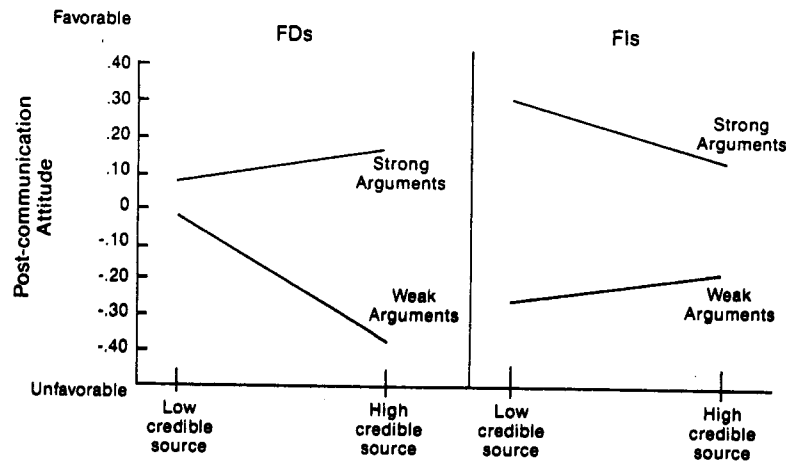


Figure 1. Mean standardized attitude data for the interaction of FD/FI by high-/low-credibility source by strong/weak message

FD subjects hearing a highly credible source had significantly different attitudes regarding the strong message ($M = .16$) than the weak message ($M = -.38$), $F(1,94) = 8.37$, $p < .005$. However, FD subjects hearing the source of low credibility did not have significantly different attitudes regarding the strong and weak messages, $F(1,93) < 1$. No Source Credibility \times Message Quality interaction was found for FI subjects, $F(1,158) < 1$, though a main effect for message quality was found, $F(1,158) = 11.08$, $p < .002$, with FI subjects who heard the strong message having more favorable attitudes ($M = .23$) than did those hearing the weak message ($M = -.23$). In summary, the three-way interaction of field dependence, message quality and source credibility indicates that message quality affected the attitudes of FD subjects only when the source was of high, but not low, credibility; however, FI subjects differentiated the messages for both sources.

Ancillary Measures

A four-way analysis of variance yielded one statistically significant effect for cognitive favorability. This was a main effect for argument quality, $F(1,353) = 33.52$, $p < .0001$, showing that subjects hearing the weak message ($M = -2.11$) had generally more negative cognitions than did subjects hearing the strong message ($M = -.31$). Because the topic was counterattitudinal, it is not surprising that the preponderance of thoughts was negative for both sets of arguments (overall, $M = -1.11$). Although there was not a significant interaction for source credibility, message quality, and field dependence ($p < .20$), as there was for the attitude data, the direction of the means was generally consistent with

those found for the attitude data. The correlation between the attitude measure and the measure of cognitive favorability was $.58, p < .0001$.⁴

A four-way analysis of variance on message recall yielded two significant effects. The first was a main effect for message quality, $F(1,353) = 11.87, p < .001$. Subjects who heard the strong message were able to recall more of the individual message arguments ($M = 4.04$) than were subjects who heard the weak message ($M = 3.42$). The second significant effect was a two-way interaction between source and message, $F(1,353) = 4.29, p < .05$. Subjects in the high credibility/strong message condition recalled more arguments, $F(1,352) = 19.02, p < .0001$ ($M = 4.32$), than did subjects in the other groups (high credibility/weak message $M = 3.42$, low credibility/strong message $M = 3.76$, low credibility/weak message $M = 3.43$). It is reasonable to assume that subjects in the high credibility/strong message cell had conventional, logical arguments, with the added incentive of knowing that a reputable person gave those arguments. Message recall differences cannot account for the three-way interaction that was found for the attitude measure, however, since the patterns of significant effects were quite different. In addition, argument recall was not as good a predictor of attitudes as was the measure of subject-generated cognitions. Specifically, attitude correlated $.10$ with recall of the strong arguments ($p < .10$) and $-.16$ with recall of the weak arguments ($p < .05$).

As mentioned previously, to assess the extent of message-relevant thinking, subjects' thoughts were judged as dealing with (1) a general assessment of message content, (2) content from a particular message, (3) the issue but not a particular message, and (4) neither message nor issue. If differences in message-relevant thinking mediated subjects' attitudes, differences should occur in type (not just direction) of thoughts subjects generated. Earlier it was suggested that FD subjects exposed to a source of low credibility should be thinking less about the persuasive message than would subjects in the other conditions. Two-way ANOVAs were performed for each of the four types of thoughts, with all FD

4. An anonymous reviewer requested additional analyses regarding the mediational role of cognitive responses in the formation of attitudes. Therefore, three analyses of covariance (ANCOVAs) were performed, with measures of subjects' cognitive responses as the covariate and the attitude measure as the dependent variable. If subjects' cognitions do not mediate their attitudes, then covarying out thoughts should not affect the significant three-way interaction of source credibility, message quality, and field dependence. However, if subjects' cognitions do mediate attitudes, covarying them out should cause a drop in F values and a loss of statistical significance. When both favorable and unfavorable thoughts were covaried out, the three-way interaction was not significant, $F(1,354) = 1.77, p < .19$. When unfavorable thoughts alone were covaried out, the three-way interaction was also not significant, $F(1,354) = 1.16, p < .29$. When favorable thoughts alone were covaried out, the significant three-way interaction was only marginally significant, $F(1,354) = 3.84, p < .06$.

subjects exposed to a low credibility source constituting one group, and all other conditions (among which there were no significant differences) constituting the other group. The two groups differed significantly in the number of thoughts they generated regarding general message assessment, $F(1,339) = 7.72, p < .02$, with the FD/low credibility source group generating fewer general thoughts about the message ($M = .56$) than did the other group ($M = .90$). On the other measures, the two groups did not differ, all $F_s(1,339) < 1$.⁵

In order to explore further the extent to which message-relevant thinking mediated attitudes differentially in the different conditions, subjects were asked to rate message quality directly (1 = not very good arguments and 11 = very good arguments), and these ratings were correlated with the attitude measure in the relevant conditions. Though differences were only marginally significant, correlations between the attitude measure and subjects' ratings of message quality revealed a pattern consistent with the view that enhancing source credibility increases the importance of message processing for FD subjects. Specifically, FI and FD subjects hearing the low credibility source (FI, $r = .48$; FD, $r = .29$) marginally differed in the correlation between ratings of their attitudes and of message quality ($p < .062$). However, correlations between FD and FI subjects exposed to sources of high credibility (FD, $r = .42$; FI, $r = .43$) did not differ, nor did the other pairs of correlations in the two by two matrix (all $p_s > .15$). Thus, when the source was of low credibility, perceptions of message quality were worse predictors of attitudes for FD subjects than for FI subjects.

Discussion

In a recent review, Eagly (1981) has noted that three general strategies have been employed in investigations of personality and persuasibility. In the most frequently employed strategy, the focus is on deriving hypotheses from personality theories and on searching for particular traits that render people especially susceptible or especially resistant to influence (e.g., Biondo & McDonald, 1971). In the second strategy, the emphasis is on theories of attitude change and on deriving and developing the theories' implications for individual differences (e.g., Eagly & Teelak, 1972). Eagly argues that neither strategy has been particularly successful because the "personality strategy" fails to consider the underlying cognitive processes postulated by attitude theories to be responsible for persuasion; and the "attitude change strategy" fails to

5. This analysis was done several months after the original data collection and analyses. In that interim period, the raw data from 12 of the subjects was inadvertently (and presumably randomly) destroyed. This accidental destruction of those data accounts for the discrepancy in n between these and the cognitive-favorability thought data.

consider stable individual differences in cognitive ability, motivation, and style. Finally, the third recommended strategy combines the earlier two. In this hybrid strategy, personality variables are chosen for investigation because of their presumed relevance to particular theories of attitude change.

In the present study, the personality variable of field dependence was selected because of its hypothesized link to the underlying cognitive processes of persuasion. Specifically, the field-dependence variable was employed to divide people into those who were likely to be motivated naturally to articulate and differentiate a highly involving counterattitudinal message (FI subjects) and those who were not (FD subjects). This division was important because it allowed a test of the hypothesis that source credibility could affect the processing of an involving persuasive communication. The results of the study indicated that source credibility failed to affect the attitudes of FI subjects; only the quality of the message arguments had an impact on their postmessage attitudes. Thus, data from the FI subjects replicated the failure of previous researchers to find source credibility effects for highly involving issues (Johnson & Scilleppi, 1969; Petty, Cacioppo, & Goldman, 1981). On the other hand, source credibility did have an impact on FD subjects. Specifically, FD subjects who heard the message from the high credibility source generated as many general message assessment thoughts as did FI subjects, but more than did FD subjects who heard the low credibility source. Also, the correlation between assessment of message quality and attitudes was lower for FD subjects who heard the low credibility source than for any other group. Thus, FD subjects responded as if increasing source credibility enhanced their propensity to think about the content of the message that was presented. The attitudinal result of this pattern of message-relevant thinking was that FD subjects who heard the low credible source did not show differential agreement with the strong and weak messages, but FD subjects who heard the high credible source did show differential persuasion by the two kinds of messages, as did all FI subjects.

No evidence was found for the view that increasing source credibility for a highly involving counterattitudinal issue would facilitate counterarguing in particular (Hass, 1981). Nor was there any support for the view that increasing source credibility would facilitate message learning or positive message associations (Hovland et al., 1953). The overall pattern of attitude, thought, and ancillary data, and the intercorrelations among the variables is most consistent with the cognitive response view that when confronted with a highly involving counterattitudinal issue, a source of high credibility will elicit greater thinking about the message than will a source of low credibility. For some people (e.g., FI subjects),

however, the enhancement in thinking will be very small because the highly involving nature of the issue already motivates a great deal of thought. For other people who are less naturally motivated to think about highly involving issues (e.g., FD subjects), the enhancement of source credibility can produce a significant increment in message scrutiny.

Finally, it is important to address the relevance of the present research to past studies of source credibility. As we noted earlier, Hovland and his colleagues (e.g., Hovland & Weiss, 1951) and more recent researchers (see the review by Sternthal, Phillips, & Dholakia, 1978) have reported that highly credible sources sometimes cause increased persuasion over less credible sources. Given the relatively uninvolved issues employed in many of these studies (e.g., Who is to blame for the steel shortage?), the cognitive response framework endorsed here would not expect subjects to be highly motivated to think about the issue. Thus, subjects' opinions about the issues would be more readily influenced by such peripheral features of the persuasion situation as source cues than by such central features as the quality of message arguments presented (Petty & Cacioppo, 1981). In fact, in studies that have manipulated personal involvement directly, enhanced source credibility has enhanced persuasion only in the low involvement conditions. When motivation to think about an issue is high, source effects have generally been small and nonsignificant (Chaiken, 1980; Johnson & Scileppi, 1969; Petty, Cacioppo, & Goldman, 1981). In the present study, source credibility was demonstrated to have an impact on attitudes for a high involvement issue for subjects who were relatively unmotivated to articulate and differentiate external stimuli. Importantly, the effect of enhanced source credibility for these subjects was *not* to increase persuasion uniformly, as is the case typically for low involvement issues; rather, the effect was to increase message scrutiny. Thus, when the information on the personally relevant issue was presented by a highly credible source, information processing by FD subjects paralleled that typically employed by FI subjects.

References

- Biondo, J., & MacDonald, A. P. Internal-external locus of control and response to influence. *Journal of Personality*, 1971, 39, 407-419.
- Cacioppo, J. T., & Petty, R. E. Effects of message repetition and position on cognitive responses, recall, and persuasion. *Journal of Personality and Social Psychology*, 1979, 37, 97-109.
- Cacioppo, J. T., & Petty, R. E. Social psychological procedures for cognitive response assessment: The thought listing technique. In T. Merluzzi, C. Glass, and M. Genest (Eds.), *Cognitive assessment*. New York: Guilford, 1981.
- Chaiken, S. Heuristic versus systematic information processing and the use of source versus

- message cues in persuasion. *Journal of Personality and Social Psychology*, 1980, 39, 752-756.
- Cialdini, R. B., Petty, R. E., & Cacioppo, J. T. Attitude and attitude change. *Annual Review of Psychology*, 1981, 32, 357-404.
- Cook, T. D., & Flay, B. R. The temporal persistence of experimentally induced attitude change: An evaluative review. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, Vol. 2. New York: Academic Press, 1978.
- Eagly, A. H. Recipient characteristics as determinants of responses to persuasion. In R. E. Petty, T. M. Ostrom, and T. C. Brock (Eds.), *Cognitive responses in persuasion*. Hillsdale, N.J.: Lawrence Erlbaum Associates, 1981.
- Eagly, A. H., & Himmelfarb, S. Attitudes and opinions. *Annual Review of Psychology*, 1978, 29, 517-554.
- Eagly, A. H., & Teelak, K. Width of the latitude of acceptance as a determinant of attitude change. *Journal of Personality and Social Psychology*, 1972, 23, 388-397.
- Ekstrom, R. B., French, J. W., & Harman, H. H. *Kit of factor referenced cognitive tests*. Princeton: Educational Testing Service, 1962.
- Ekstrom, R. B., French, J. W., & Harman, H. H. *Manual for kit of factor-referenced cognitive tests*. Princeton: Educational Testing Service, 1976.
- Goodenough, D. R. The role of individual differences in field dependence as a factor in learning and memory. *Psychological Bulletin*, 1976, 83, 675-694.
- Halverson, R. R., & Pallak, M. S. Commitment, ego-involvement, and resistance to attack. *Journal of Experimental Social Psychology*, 1978, 14, 1-12.
- Hass, R. G. Effects of source characteristics on cognitive responses and persuasion. In R. E. Petty, T. M. Ostrom, and T. C. Brock (Eds.), *Cognitive responses in persuasion*. Hillsdale, N.J.: Lawrence Erlbaum Associates, 1981.
- Hovland, C. I., Janis, I. L., & Kelley, J. J. *Communication and persuasion*. New Haven: Yale University Press, 1953.
- Hovland, C. I., & Weiss, W. The influence of source credibility on communication effectiveness. *Public Opinion Quarterly*, 1951, 15, 635-650.
- Insko, C. A., Lind, E. A., & LaTour, S. Persuasion, recall, and thoughts. *Representative Research in Social Psychology*, 1976, 7, 66-78.
- Jackson, D. N., Messick, S., & Myers, C. T. Evaluation of group and individual forms of embedded-figures measures of field dependence. *Educational and Psychological Measurement*, 1964, 24, 177-192.
- Johnson, H. H., & Scileppi, J. A. Effects of ego-involvement conditions on attitude change to high- and low-credibility communicators. *Journal of Personality and Social Psychology*, 1969, 13, 31-36.
- Kelman, H. C., & Hovland, C. I. "Reinstatement" of the communicator in delayed measurement of opinion change. *Journal of Abnormal and Social Psychology*, 1953, 48, 327-335.
- Love, R. E., & Greenwald, A. G. Cognitive responses to persuasion as mediators of opinion change. *Journal of Social Psychology*, 1978, 104, 231-241.
- Mills, J., & Harvey, O. J. Opinion change as a function of when information about the communicator is received and whether he is attractive or expert. *Journal of Personality and Social Psychology*, 1972, 21, 52-55.
- Perloff, R. M., & Brock, T. C. And thinking makes it so: Cognitive responses to persuasion. In M. E. Roloff, and G. R. Miller (Eds.), *Persuasion: New directions in theory and research*. Beverly Hills: Sage, 1980.
- Petty, R. E. & Cacioppo, J. T. Issue involvement can increase or decrease persuasion by enhancing message-relevant cognitive responses. *Journal of Personality and Social Psychology*, 1979, 37, 1915-1926.
- Petty, R. E., & Cacioppo, J. T. *Attitudes and persuasion: Classic and contemporary approaches*. Dubuque, IA: William C. Brown, 1981.
- Petty, R. E., Cacioppo, J. T., & Goldman, R. Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology*, 1981, 41, 847-855.
- Petty, R. E., Cacioppo, J. T., & Heesacker, M. The use of rhetorical questions in persuasion:

- A cognitive response analysis. *Journal of Personality and Social Psychology*, 1981, 40, 432-440.
- Petty, R. E., Ostrom, T. M., & Brock, T. C. (Eds.). *Cognitive responses in persuasion*. Hillsdale, N.J.: Lawrence Erlbaum Associates, 1981.
- Rhine, R. J., & Severence, L. J. Ego-involvement, discrepancy, source credibility, and attitude change. *Journal of Personality and Social Psychology*, 1970, 16, 175-190.
- Sherif, C. W. *Orientation in social psychology*. New York: Harper & Row, 1976.
- Sternthal, B., Dholakia, R., & Leavitt, C. The persuasive effect of source credibility: Tests of cognitive response. *Journal of Consumer Research*, 1978, 4, 252-260.
- Sternthal, B., Phillips, L., & Dholakia, R. The persuasive effect of source credibility: A situational analysis. *Public Opinion Quarterly*, 1978, 42, 285-314.
- Witkin, H. A., & Goodenough, D. R. Field dependence and interpersonal behavior. *Psychological Bulletin*, 1977, 84, 661-689.
- Witkin, H. A., Goodenough, D. R., & Oltman, P. K. Psychological differentiation: Current status. *Journal of Personality and Social Psychology*, 1979, 37, 1127-1145.

Manuscript received July 15, 1982; revised January 20, 1983.