THE IMPORTANCE OF COGNITIVE RESPONSES IN PERSUASION

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Abstract

This article reports five experiments examining the role of cognitive responses in the persuasion process. The first three experiments examine the effects of variables that facilitate or inhibit cognitive responses to communications (forewarning, distraction, and body posture). The final two experiments examine the importance of cognitive responses in producing durable attitude shifts.

The Cognitive Response Approach

In the years following the pioneering work of Carl Hovland and his associates during World War II, and later at Yale (e.g. Hovland, Janis and Kelley, 1953; Hovland, Lumsdaine, and Sheffield, 1949, etc.), four approaches to the study of persuasion have emerged (McGuire, 1972; Smith, 1968). "Learning approaches" emphasize the importance of learning the content of the persuasive communication; "perceptual approaches" emphasize the meaning of the communication for the individual subject; "functional approaches" discuss the relationship of the communication to the recipient's underlying motivational and personality needs; and, "consistency approaches" stress the need for the recipient to keep a maximum amount of internal harmony within his belief system.

An approach that borrows somewhat from each of the above approaches has been called the "cognitive response approach" (Greenwald, 1968). The basic tenet of this approach is that the cognitive responses (or thoughts) evoked by the persuasive communication are the crucial mediators of the attitude change that is produced. The cognitive response approach postulates that when a person receives a persuasive communication, he will attempt to relate the new information to his existing repertoire of cognitions. In doing this, the person may be expected to consider a substantial amount of cognitive material beyond that of the communication itself. These additional self-generated cognitions that a person considers, may be in agreement with the proposals of the source, or in disagreement. To the extent that the communication evokes favorable cognitive response, attitude change in the direction advocated by the source should be facilitated. To the extent that the communication evokes cognitive responses that are not favorable, either because the self-generated cognitions refute the arguments of the source, or support a position other than the one advocated, attitude change in the direction advocated by the source should be inhibited. It is also possible that the subjects' own cognitive responses are so much more persuasive than the arguments of the source, that attitude change in the direction opposite to that advocated may result.

The notion that a person's cognitive responses to a communication are an important mediator of persuasion is not a new one. As early as 1949, Hovland, Lumsdaine, and Sheffield suggested that audience members may be less persuaded if they engage in "rehearsing" their own arguments against the position advocated (p. 201). Similar statements of the importance of a recipient's personal responses to a communication have been made by Kelman (1953), Festinger and Maccoby (1964), Weiss (1968), Wright (1974), and others. Although there is quite a long history of research in which subjects' beliefs were related to attitudes (e.g. Carlson, 1956; Fishbein, 1963, etc.), only recently has research interest turned to measuring freely elicited cognitive responses to persuasive communications (e.g., Brock, 1967; Cook, 1969; etc.).

The present paper reports brief summaries of some recent experiments in which we have attempted to examine the effects of various variables on cognitive responding and persuasion. In some experiments we attempted to increase cognitive responses and monitor the impact on persuasibility, and in other experiments we attempted to inhibit cognitive responding. In the final experiments reported in this paper, we were concerned with the role of cognitive responses in producing enduring attitude shifts.

Increasing Cognitive Responding: the Effects of Forewarning

In mass media settings, persons are often forewarned of upcoming communications. McGuire and Papageorgis (1962) suggested that when a person is warned of an upcoming counterattitudinal communication, anticipatory cognitive responses would be generated. More specifically, their notion is that when a person is about to be confronted with a discrepant communication on an important topic, he will use the period following the warning, but preceding the message, to consider arguments supporting his own position, and refuting antagonistic positions. These anticipatory cognitive responses will make him more resistant to the persuasive message. Thus, for example, we would expect that if a T.V. viewer were warned that "At 11:00, Congressman Smith advocates a tax increase," s(he) would be more resistant to the congressman's proposal than if no warning occurred.

Some indirect support for the cognitive response explanation of forewarning effects already exists. For example, Freedman and Sears (1965) warned subjects of an impending discrepant communication either 0, 2, or 10 minutes before the message, and found that the longer the period between warning and message, the less subjects were persuaded by it. The longer the delay, presumably, the more counterarguments the subjects could muster.. Hass and Grady (1975) warned subjects of a communication's topic, or topic and position, either 0 or 10 minutes before the message. Forewarning produced resistance to persuasion only when a delay was present suggesting a counterargumentation period was necessary for resistance. The goal of the present experiment was to provide more definitive evidence for the counterargument (cognitive response) explanation of the persuasion inhibiting effects of forewarning by obtaining measures of cognitive responses.[1]

Procedure

Sixty undergraduate students at Ohio State University were randomly assigned to the cells of a 2 (warning or no warning) X 2 (instructed to write "topic" thoughts or "actual" thoughts) factorial design. The experiment

[1] A more complete account of this experiment can be found in Petty and Cacioppo (1976).

was conducted during a portion of the regular class period in two introductory psychology classes. Fifteen additional introductory psychology students served in a control condition and merely responded to the attitude dependent variable.

After the class instructor explained to the students that they would be hearing a guest lecture by "Dr. John Lingle from the counseling center," he distributed some booklets which contained the manipulations. On the first page of the booklets, subjects in the warned conditions read that Dr. Lingle would be discussing "why he has recommended to the University President that all freshmen and sophomores be required to live in campus dormitories." Pilot testing had revealed this issue to be one on which students were highly committed to their positions in opposition to that of the speaker. Subjects in the unwarned conditions read that the speaker would be discussing "some of the conclusions he has come to while working at the counseling center." After it was clear that all students had read the first booklet page, the speaker asked them to "please sit quietly for a few minutes while I look over my notes."

After 3 minutes of sitting quietly, the speaker asked subjects to turn to the next page in their booklets. Employing a procedure adapted from Brock (1967) and Greenwald (1968), subjects in the actual thoughts conditions were told to write down the thoughts that had occurred to them during the past few minutes. Subjects in the topic thoughts conditions were told to write their thoughts on the topic of requiring all freshmen and sophomores to live in dorms. After the 3 minute period allowed for thought listing elapsed, the speaker began his 5 minute talk containing six major arguments in favor of the dorm requirement. After the speech, subjects completed an 11-point Likert-type scale assessing their agreement with the dorm requirement. In addition, each of the thoughts that a subject recorded was submitted to two judges (blind to experimental conditions) for scoring as either a counterargument (opposed to the dorm requirement), a proargument (in favor of the dorm requirement), or a neutral thought (unrelated to the topic).

The cognitive response model would predict that both warned groups would be resistant to persuasion because the warning would trigger anticipatory counterargumentation. In addition, the unwarned group that was given an opportunity to record thoughts and ideas on the topic should show resistance because the model holds that it is not the "warning," but the anticipatory thinking about the topic that confers resistance to the persuasive appeal. Only the unwarned group that did no anticipatory thinking about the topic should show susceptibility to the communication.

Results

Table 1 presents the results for each cell. An *a priori* *F* contrast indicated that the unwarned actual thoughts group was more persuaded by the communication than the combination of the remaining groups (excluding control) $F(1,56) = 5.30$, $p < .02$. In addition, a Dunnett test indicated that the only group that differed from the control on the attitude measure was the unwarned actual thoughts group ($p < .05$) paralleling the results of the *a priori* contrast.

A 2 X 2 analysis of variance on the cognitive measures indicated that warned subjects generated more counterarguments than unwarned subjects, $F(1,56) = 7.40$, $p < .009$, and topic-thoughts subjects generated more counterarguments than actual-thoughts subjects, $F(1,56) = 17.62$, $p < .001$. Of primary interest, however, is the fact that the unwarned actual-thoughts group (which showed the most persuasion) generated significantly fewer counterarguments than the combination of the remaining groups (excluding control), $F(1,56) = 19.03$, $p < .001$. No significant differences were obtained on the measure of proargumentation.

TABLE 1
The Effects of Warning
and Thought Listing Instructions on
Attitude and Cognitive Response Measures

	Unwarned		Warned	
	Actual Thoughts	Topic Thoughts	Actual Thoughts	Topic Thoughts
Attitude	6.27	4.60	3.47	4.20
Counter-arguments	0.00	2.67	2.20	3.46
Pro-arguments	0.00	1.73	.27	2.20
Neutral Thoughts	4.93	.60	2.87	.27

Note.--Higher means on the attitude measure indicates more agreement with the speaker's position. Control mean = 3.23. $N = 15$ subjects per cell.

Conclusions

The experimental results indicated that forewarning of an impending discrepant communication on an involving topic led to anticipatory negative responses (counterarguments) on the topic, and subsequent resistance to persuasion. In addition, resistance was produced in an unwarned group, simply by instructing them to list their thoughts on the topic. This suggests that warnings about impending communications on involving topics produce resistance to persuasion primarily because tney trigger anticipatory negative cognitive responses.

Reducing Cognitive Responding: the Effects of Distraction

One of the most salient features of mass media communications is that they are surrounded and accompanied by extraneous distractions. Festinger and Maccoby (1964) suggested that when a person is distracted from attending to a counterattitudinal communication, counterarguing will be inhibited. Previous research has supported the notion that distraction can enhance the persuasiveness of a message by reducing counterarguing (e.g., Osterhouse and Brock, 1970). The current study investigated the possibility that distraction could also reduce persuasiveness if a message that elicited primarily proarguments rather than counterarguments was used. It was hypothesized that distraction would interfere with the dominant cognitive response to a message. If the dominant response to a message was proargumentation, then distraction would interfere with these favorable thoughts and reduce the persuasiveness of the message.[2]

Procedure

Fifty-two undergraduates at Ohio State were randomly assigned to the cells of a 2 (low or high distraction) X 2 (proargumentation or counterargumentation message) factorial design. Subjects were tested in individual cubicles in a language laboratory.

Over headphones, subjects heard a message which advocated a 20 percent reduction in tuition. One version of the message contained five logically sound, defend-

[2] A more complete account of this experiment can be found in Petty, Wells, & Brock (1976).

able arguments, and was thus designed to elicit primarily proarguments, while another version of the message contained five easy to refute arguments, and thus was designed to elicit predominantly counterarguments. While listening to the message, subjects were told to record in which quadrant an X appeared on a screen before them. After the first X, the Xs appeared either every 5 or 15 seconds creating the high and low distraction conditions.

Finally, after hearing the message, subjects rated their agreement with the tuition reduction on a 12-point Likert-type scale, and responded to a fill-in question asking what amount of tuition they felt was appropriate. Responses to these two questions were converted to standard scores and summed to form the index of attitude. In addition, subjects were given 2 1/2 minutes to write their thoughts (counterarguments, proarguments, or neutral thoughts) on the topic of cutting tuition. It was expected that distraction would enhance persuasion for the message containing poor arguments, but reduce persuasion for the message containing good arguments.

Results

Table 2 presents the key results. More counterarguments were generated to the message with poor arguments than to the message with good arguments, $F(1,48) = 52.49$, $p < .001$, and more proarguments were

TABLE 2
Mean Counterarguments, Proarguments, and Attitude in Relation to Message Type and Level of Distraction

	Low Distraction		High Distraction	
	Poor Message	Good Message	Poor Message	Good Message
Attitude	-1.45	.95	.01	.42
Counter-arguments	3.92	.38	2.61	.48
Pro-arguments	1.15	3.96	1.77	2.31

Note.--$N = 13$ subjects per cell.

generated to the message with good arguments than to the message with poor arguments, $F(1,48) = 14.84$, $p < .001$. Subjects who heard the good quality message expressed more agreement with the message than subjects hearing the poor quality message, $F(1,48) = 14.10$, $p < .001$. Also, a significant message X distraction interaction on the attitude measure ($F(1,48) = 6.89$, $p < .02$) indicated support for the major hypothesis. As distraction increased, persuasion tended to increase for the message with poor arguments, but decrease for the message with good arguments. In addition, employing the Duncan multiple range procedure indicated that as distraction increased, the number of counterarguments generated to the poor message decreased, as did the number of proarguments generated to the good message ($ps < .05$). The number of counterarguments generated to the good message, and the number of proarguments generated to the poor message were unaffected by increasing the distraction, as was the number of total thoughts.

Conclusions

The experiment supported the hypothesis that distraction works to inhibit the dominant cognitive response to a message. If the dominant response to a message is negative responses (counterarguments), distraction will enhance persuasiveness, but if the dominant response to a message is positive responses (proarguments) distraction will reduce its persuasive impact. The results of the present experiment have extended the role of distraction beyond the confines of counter-attitudinal persuasion, by demonstrating that favorable as well as unfavorable responses can be disrupted by distraction.

Increasing and Reducing Cognitive Responses: the Effects of Body Posture

Persons are typically exposed to mass media communications while they are sitting down, but it is not uncommon to be exposed to a communication while lying in bed, or standing in the kitchen. To date, there is only anecdotal evidence to suggest a relationship between body posture and cognitive reactions. Folkwisdom tells us that if you have bad news to tell someone, you should sit them, or preferably lie them down. The notion is that a person who is standing will react more strongly to the bad news than a person in the more vulnerable sitting or lying positions. A person who is standing is presumably ready to attack, but a supine person is more agreeable. During the recent Presidential debates between Gerald Ford and Jimmy Carter, Time magazine reported that Carter's campaign staff, concerned about having their candidate appear to be attacking an incumbent president too strongly, wanted both men to be seated during the debates "because Carter, like most people, tends to be less aggressive sitting down" (September 27, 1976, p. 11). In the current experiment, we hypothesized that a person in the attacking, standing position would be more likely to generate negative cognitive responses to a counter-attitudinal message, and thus be less persuaded, than a person who was in the more vulnerable lying position.[3]

Procedure

Seventy-eight undergraduates at Ohio State were individually tested in what they were led to believe was a cooperative investigation between the psychology department and "Tech-Headphones, Inc." Subjects were told that most stereo headphones were designed to be used most efficiently in only one position, and that their task would be to try on one pair of headphones. Subjects were asked either to stand, sit in a wooden chair, lie on a formica table, or lie on a cushioned table while they listed to a "campus radio broadcast" over the headphones. They were told that after the broadcast, they would fill out a questionnaire on which they would rate the quality of the headphones, their comfort while listening, and some content questions about the broadcast.

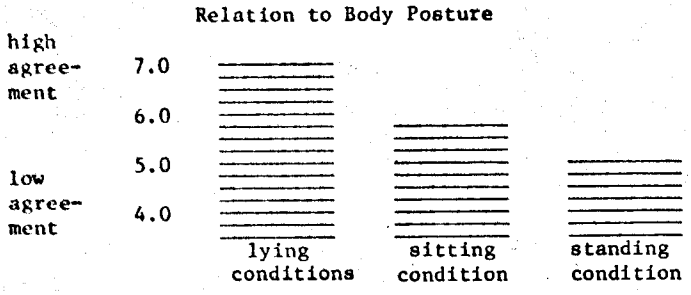
When a subject was in position, a stereo type player was activated. After about 2 minutes of prerecorded music, the subjects heard a 3 minute "editorial" advocating that the tuition at Ohio State be increased by 20 percent. When the broadcast was over, subjects completed the questionnaire on which they rated their agreement with the tuition increase on a 12-point Likert-type scale, and were given 2 1/2 minutes to write their thoughts (counterarguments, proarguments, or neutral thoughts) on the topic of raising tuition.

Results

Figure 1 presents the attitude results. The two conditions in which subjects were lying down did not differ significantly from each other, but subjects in the combination of these two conditions were in significantly more agreement with the idea of raising tuition

[3] A more complete account of this experiment can be found in Petty, Wells, & Brock (1975).

FIGURE 1
Mean Agreement in
Relation to Body Posture



than were subjects in the standing condition $F(1,74) = 6.24$, $p < .05$. While subjects in the standing condition generated more counterarguments ($M = 1.6$) than subjects in the lying condition ($M = 1.3$), and fewer proarguments (standing $M = 1.8$, lying $M = 2.1$), these means were not significantly different.

The within cells correlation between number of counterarguments and agreement was $-.51$ ($p < .05$), and between number of proarguments and agreement, $.56$, ($p < .05$). A Duncan multiple range test indicated that the sitting position was rated as significantly more comfortable than either the standing or lying positions ($ps < .05$).

Conclusions

The results provided some support for our notion that a standing position would promote resistance to persuasion by facilitating the production of negative responses, and lying would promote susceptibility to persuasion by inhibiting negative responses. The fact that the sitting position was rated as the most comfortable, but fell between standing and lying on the agreement measure, argues against a simple "comfort" explanation of the data. Cacioppo & Sandman (1977) instrumentally conditioned subjects to increase and decrease their heart rate, and found that there was more counterargumentation and less agreement with discrepant messages presented under high than under low heart rate conditions. They argue that accelerated heart rate facilitates message processing. In the current experiment, standing subjects may have had higher heart rates than supine subjects and this may have facilitated counterarguing the message.

Cognitive Responses and the Persistence of Attitude Change

Experiment 1: Cognitive Responses and Personal Relevance of the Issue

Cialdini, Levy, Herman, and Evenbeck (1973) demonstrated that subjects who expected to discuss an uninvolving issue with a partner on the opposite side of the issue to their own, showed anticipatory moderation of position (i.e. movement toward the middle of the opinion scale). When the expectation of discussion was cancelled (i.e. when subjects were told that they were "controls" and would no longer have to discuss the issue), subjects "snapped-back" to their original premoderation positions. Cialdini et al. argue that subjects expecting to discuss an issue with little personal relevance are more concerned with presenting a good face than with making a strong presentation of their own position. Subjects adopt a moderate issue position, not because they have thoughtfully reconsidered the issue, but merely because they want to adopt a position that allows them to appear open and broad-minded. Thus, since no true reconsideration of the issue has taken place, when the expectation of discussion is cancelled, subjects return to their original positions. Hass and Mann (1975) have made a similar argument.

In the current study, we hypothesized that if a person expected to discuss a topic with high personal relevance, anticipatory cognitive activity in support of one's position would take place in the prediscussion period, because on a topic of high personal relevance, concern for appearances should be dwarfed by the desire to defend one's position. We expected this rehearsal of cognitive responses favorable to one's position to lead to lasting, rather than temporary, polarization on the issue.[4]

Procedure. One hundred thirty-three Ohio State undergraduates were randomly assigned to the cells of a 2 (issue) X 2 (high or low personal relevance) X 2 (immediate or delayed discussion) factorial design. Eight subjects were eliminated from the analyses because they failed to respond to key opinion items.

All manipulations and dependent measures were contained in booklets that were distributed to subjects. The booklets informed subjects that they had been assigned to discuss with an opponent either Issue 1 (The establishment of required comprehensive exams for seniors at Ohio State) or Issue 2 (The division of O.S.U. into separate graduate and undergraduate campuses); explained that the discussion would take place in a few minutes (immediate discussion condition) or in a week (delayed discussion condition); and informed them that the proposals were to take effect in one year (high personal relevance), or in six years (low personal relevance). After the induction of the manipulations, subjects recorded which side of the issue they favored, and were given 3 minutes to write their thoughts on each of the two topics (these ideas were later coded into two categories: ideas "supporting" a subject's position, and "other" thoughts). Subjects then gave their opinions by marking a series of four 11-point semantic differential scales for each topic. When this was completed, the group was divided in half. Each subgroup was told that they had been assigned to a "control condition" and would not have to discuss the assigned issue. Instead, a Likert-type opinion questionnaire was administered.

Each subject served as an experimental subject on the issue he was assigned to discuss, and as a control subject on the non-assigned issue. An anticipation measure was calculated as a difference score between a subject's score on the semantic differential scales for the assigned issue and the mean score of the comparable control group (i.e. subjects who were on the same side of the critical issue as the subject but who did not expect to discuss it). The cancelled anticipation measure was similar except that it was a difference score between a subject's own score on the Likert questionnaire and the mean score of the comparable control group on that measure. The first measure represented the amount of shift resulting from the expectation of discussion, while the second represented the amount of position change still present after subjects no longer expected discussion.

It was hypothesized that the expectation of discussion would produce moderation of issue position only when the onset of the discussion was to be immediate and the topic was not personally relevant. When the discussion was to be immediate, and the topic was personally important, polarization was expected. It was fur-

[4] A more complete account of this experiment can be found in Cialdini, Levy, Herman, Kozlowski, & Petty (1976).

ther hypothesized that when the expectation of discussion was cancelled, "moderators" would snap-back to their original positions, but "polarizers" who engaged in supportive cognitive activity would not.

Results. A manipulation check on the personal relevance variable revealed that the manipulation worked for Issue 1 ($p < .001$) but not for Issue 2 ($p > .54$). Accordingly, only the data for Issue 1 were analyzed (cell means are presented in Table 3). Only subjects in the low relevance immediate discussion condition showed a mean moderation shift on the anticipation measure, and that mean shift was significantly different from the combination of the other three, $F(1,57) = 6.74$, $p < .02$. Only subjects in the high relevance immediate discussion cell were substantially resistant to a "snap-back" effect. A planned comparison of the amount of snap-back in that cell as opposed to the other three gave evidence of greater resistance, $F(1,57) = 3.08$, $p < .05$, one tail. Finally, the high relevance immediate condition showed more supportive cognitive activity than a combination of the other three conditions, $F(1,57) = 6.93$, $p < .02$; and also more supportive cognitive activity than control subjects who did not expect to discuss that issue, $F(1,79) = 4.86$, $p < .03$.

TABLE 3
Polarization and Moderation Shifts and Number of Supportive Thoughts per Condition

	High Relevance		Low Relevance	
	Immediate Discussion	Delayed Discussion	Immediate Discussion	Delayed Discussion
Anticipation	1.76	1.63	-2.67	0.86
Cancelled anticipation	1.48	0.00	-0.55	-0.58
Supportive Thoughts	3.78	2.77	2.87	2.27

Note.--Positive means for the anticipation and cancelled anticipation measures indicate polarization shifts from control; negative means indicate moderation shifts.

Conclusions. An important finding of the current experiment was that thoughtful consideration of the attitude issue apparently only occurred when the issue had high personal relevance for the subjects. The elasticity of most of the attitude changes in the current experiment suggests that they have a strategic basis, and also that they are fundamentally different from genuine modifications of attitude. However, one set of experimental conditions made the anticipatory shifts relatively non-elastic. When subjects expected to engage in an immediate discussion of a personally relevant issue, there was a tendency for the anticipatory polarization shifts that resulted to be resistant to the snap-back effect when the discussion was cancelled. This stability of attitude was accompanied by enhanced mental activity, and it is this cognitive activity that appears to be instrumental in producing lasting attitude change.

Experiment 2: Further Evidence for the Role of Cognitive Responses in Producing Lasting Attitude Changes

Experiment 1 showed that expectation of discussion of a personally relevant topic with an opponent produced lasting attitude polarization. The current experiment makes a direct test of whether that lasting polarization can be attributed to the production of issue relevant cognitive responses in the prediscussion interval. In the present investigation, all subjects expected to discuss a highly involving topic with an opponent. Half of the subjects were allowed time to think about their issue before the discussion was to take place, while half were distracted from doing so. Lasting attitude polarization was expected only for those subjects who were permitted time to engage in anticipatory cognitive responses.[5]

Procedure. Seventy-four Ohio State undergraduates were assigned to the cells of a 2 (issue) X 2 (distracted from thinking about the topic or not distracted) factorial design. Again, all manipulations were contained in booklets informing subjects that they had been assigned to discuss with an opponent either Issue 1 (The establishment of required comprehensive exams for seniors at Ohio State) or Issue 2 (The turning of all undergraduate teaching responsibilities over to graduate students). All subjects were led to believe that the proposals were likely to take effect in 1 year, and that the discussions would take place in a few minutes.

After recording which side of the issue they favored, non-distracted subjects were given 3 1/2 minutes to sit in silence to "collect their thoughts on the assigned issue," while distracted subjects performed a task requiring them to count the number of dots contained in 18 two-inch square boxes. As in the previous experiment, subjects then gave their opinions on the issues by marking a series of four 11-point semantic differential scales for each topic. After dividing the group in half and telling them that they had been assigned to a "control condition" and would not have to discuss the assigned issue after all, a Likert-type opinion measure was administered. The anticipation and cancelled anticipation measures were calculated as in Experiment 1.

Results. In an examination of the anticipation measure, both distracted ($M = 1.71$, $F(1,36) = 4.48$, $p < .05$) and non-distracted ($M = 1.46$, $F(1,36) = 2.95$, $p < .05$, one tail) groups showed evidence of anticipatory polarization. On the cancelled anticipation measure, however, only the non-distracted group ($M = 1.73$, $F(1,36) = 5.09$, $p < .05$) showed evidence of attitude change that persisted after the expectation of discussion had been cancelled. The distracted group ($M = .66$) snapped back to a position not significantly different from controls.

Conclusions. The reason the non-distracted group showed lasting polarization, and the distracted group did not, is presumably because the non-distracted group had time to engage in cognitive responding that bolstered the attitude position adopted, while the distracted group did not. Taken together, Experiments 1 and 2 tend to demonstrate that subjects will be motivated to thoughtfully consider issues of high personal relevance, and this thoughtful consideration can lead to durable shifts in attitude. Opinion positions taken on issues of low personal relevance tend to be much more labile and subject to situational pressures.

Final Remarks

The present series of experiments was designed to show the importance of a recipient's cognitive responses in persuasion situations. By employing manipulations designed to increase negative cognitive responses (such as forewarning, or simply asking a person to stand up) we were able to produce resistance to a persuasive communication. By employing manipulations designed to decrease negative cognitive responses

[5] A more complete account of this experiment can be found in Petty & Cialdini (1976).

(such as distraction, or simply asking a person to lie down), we were able to enhance the persuasiveness of a communication. Taken together, these results provide strong support for a cognitive response view of the persuasion process.

In the final two experiments, we were able to show that cognitive responses were related to the persistence of attitude changes. It was only when a person put some cognitive work into evaluating a topic, thereby adding new beliefs, making existing ones more salient, or reorganizing the cognitive structure, that enduring change took place.

These results may, of course, offer a clue as to why some advertisements do not produce lasting attitude change effects. The research reported here would suggest that unless an ad can motivate cognitive responding (by showing personal relevance, perhaps), no enduring reorganization of cognitions will occur, nor will any lasting attitude change ensue. By routinely including measures of cognitive responses in research on persuasion, we may be able to identify those variables that produce cognitive responses (or inhibit them), enabling us to determine procedures that will produce genuine modifications of attitude, versus those that produce only momentary shifts.

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