

EFFECTS OF PRIOR COMMITMENT ON BEHAVIOR CHANGE AFTER A PERSUASIVE COMMUNICATION*

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When a persuasive communication causes a change in belief, will behavior relevant to the belief also change? Past experiments have shown both successes and failures in obtaining such behavior change. The present study offers a reconciliation of these differences in findings by showing that the pattern of belief change with no behavior change occurred only in subjects who, before a communication, committed themselves to a position opposing it. Without this commitment, subjects showed no immunity against the effects of the communication on behavior. Some theoretical implications of this finding are discussed. A condensed version of this paper was read at the American Psychological Association meetings in Los Angeles in 1964.

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WHEN a smoker becomes convinced that smoking is dangerous, will he then cut down on his cigarette habit? When a neurotic achieves some understanding of his adjustment problems, will his behavioral symptoms begin to fade? More generally, when some force brings about a change in belief, will behavior relevant to the belief also change? Although psychologists have devoted much effort to studying both change of verbal beliefs and change of nonverbal behavior, relatively little attention has been given to this question about the relationship between belief change and behavior change.¹

Festinger has recently interpreted the existing evidence as indicating that behavior change does not necessarily accompany the change of relevant beliefs.² More recently, however, in the author's own re-

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¹ It should be pointed out that only a limited subset of beliefs—those about the desirability of performing some action—has a direct bearing on behavior. Because of its bearing on behavior, however, this subset is an extremely important one and includes, for instance, beliefs about the desirability of voting for a particular candidate, of going to college, of getting married, of going to war for one's country, etc.

² L. Festinger, "Behavioral Support for Opinion Change," *Public Opinion Quarterly*, Vol. 28, 1964, pp. 404-417.

search,³ a communication to junior high school children advocating the importance of vocabulary learning did influence both belief (rated importance of vocabulary learning) and relevant action (learning vocabulary by doing difficult vocabulary problems). A further experiment with junior high school children suggested a possible explanation for some failures to obtain behavior change following belief change.⁴ In that experiment, the subjects were required to state a preference for or against vocabulary learning prior to receiving the pro-vocabulary communication. It was found that subjects who were initially anti-vocabulary showed a temporary belief change following the communication, but *no* behavior change, while subjects who initially favored vocabulary reacted to the communication with both greater belief change and substantial behavior change. It appeared, then, that a prior commitment opposing an influence attempt could produce the pattern of belief change without behavior change. The present experiment was an attempt to reproduce this finding under conditions more specifically designed to determine the importance of the prior commitment.

METHOD

Subjects. Four eighth-grade classes in a Trenton, N. J., junior high school participated in the experiment.⁵ Two classes were assigned to the Commitment condition and two to the No Commitment condition in such fashion as to match these two conditions in terms of subjects' mean I.Q. The experimenter met with each of the classes for two testing sessions, separated by nine days. Results will be given only for those subjects present at both sessions.

Procedure. The experimental procedure was, in large part, similar to that used and described in detail in the author's previous work.⁶ Only the major procedural features of the present experiment will be described here.

Belief and behavior relevant to vocabulary learning were assessed at a few points during the experiment. In each case, belief scores were obtained by asking the subjects to rank eight areas of learning (including history and vocabulary) in order of importance. The belief score was the extent to which vocabulary was ranked as more important than history. This score could range, then, from +7, when vo-

³ A. G. Greenwald, "Behavior Change Following a Persuasive Communication," *Journal of Personality*, Vol. 33, 1965, pp. 370-391.

⁴ Also described in *ibid.*

⁵ The author is indebted to Reynold Strunk, principal of Junior High School Four in Trenton, and to Sarah C. Christie, Assistant Superintendent of Schools in Trenton, for their generous cooperation in making arrangements for the experiment.

⁶ Greenwald, *op. cit.*

cabulary was ranked first and history eighth, to —7, with history first and vocabulary eighth. To obtain behavior scores, subjects were given a series of seven choices between doing a difficult problem from which they could learn something about history and doing one from which they could learn some vocabulary. (The problems were presented as learning opportunities, with answers provided, and *not* as a test.) The behavior score was the number, ranging from 0 to 7, of vocabulary problems chosen and done.

In the No Commitment condition, session I consisted of administration of pre-test belief and behavior measures; reading of a communication (attributed to a group of college professors) strongly advocating the importance of vocabulary learning; and administration of behavior and belief post-tests—all of this taking about half an hour for each class. Nine days later, the experimenter returned to each of the classes for session II, in which delayed behavior and belief post-tests were administered.

In the Commitment condition, the procedure was identical to that for the No Commitment condition, with one exception: the Commitment subjects were not pre-tested. Instead, they were asked to state in writing—and prior to hearing the communication—a preference for learning about either history or vocabulary. In addition to naming his preferred topic, each subject was asked to write three or four brief reasons for his choice and then to work quickly through ten practice problems—five of each type.

In summary, the design called for one group of subjects to commit themselves to an initial preference for or against vocabulary, while a second group expressed belief in the importance of vocabulary and behavioral preference for vocabulary in a fashion that avoided commitment. It was predicted that the Commitment condition subjects who were initially against vocabulary would be influenced by the communication to increase their belief in the importance of vocabulary learning but would, despite this influence, not alter their vocabulary-learning behavior correspondingly. Pre-test belief and behavior levels for the anti-vocabulary subjects in the Commitment condition (who, it will be recalled, were not pre-tested) were estimated in order to test this prediction from scores of initially anti-vocabulary subjects in the No Commitment condition (who were pre-tested). For this purpose, No Commitment subjects were designated “anti-vocabulary” if they had both (1) ranked history as more important than vocabulary on the belief pre-test and (2) selected a history problem as their first choice on the behavior pre-test. The remaining No Commitment subjects were considered to be “pro-vocabulary.” This method of selecting “control” subsamples was used because it yielded a proportion

of anti-vocabulary subjects in the No Commitment condition (46 per cent) that best approximated the proportion of anti-vocabulary subjects in the Commitment condition (37 per cent). Alternative procedures were possible and will be discussed below.

RESULTS

The results are summarized in the accompanying table. Column 4 shows that the predicted results were obtained; that is, the beliefs of the anti-vocabulary Commitment subjects were affected by the communication while their behavior was not. The upper half of column 4 shows that for belief both the post-test and delayed post-test were significantly higher than the estimated pre-test level, while the lower half of the column shows that there was no significant behavior change on either of the post-tests. From these data, it may be concluded (as predicted) that subjects who, before receipt of a communication, commit themselves to a position opposing it show effects of the communication on belief but not on behavior.

An incidental finding of the experiment stems from the fact that both the lowest and highest post-test scores occurred in the subsamples of the Commitment condition, while the No Commitment condition subsamples were intermediate; that is, prior commitment against the communication increased resistance to both belief and behavior change, while prior commitment in favor of the communication increased susceptibility to both types of change.⁷ The significance levels of these differences are shown in columns 3 and 6 of the table. Another way of describing this finding would be to say that the elicitation of a commitment had the effect of polarizing subjects in the Commitment condition in the direction of their initial preference.⁸

DISCUSSION

Control subsample selection procedure. Some attention should be given to the procedure used to select the pro- and anti-vocabulary "control" subsamples from the No Commitment condition, since it is on the basis of the pre-test data from these subsamples that conclusions have been made about the effects of both the commitment and the communication. Note that the pre-test belief and behavior data for the

⁷ Caution is necessary in regard to the latter part of this conclusion, since the pro-vocabulary Commitment subjects may have undergone some self-persuasion in addition to the communication persuasion. That is, their high post-test scores may reflect the effects of their own arguments in favor of vocabulary learning in addition to the effects of the communication's arguments.

⁸ Cf. D. O. Sears, J. L. Freedman, and E. F. O'Connor, Jr., "The Effects of Anticipated Debate and Commitment on the Polarization of Audience Opinion," *Public Opinion Quarterly*, Vol. 28, 1964, pp. 615-627.

MEAN BELIEF AND BEHAVIOR SCORES FOR PRO- AND ANTI-VOCABULARY SUBJECTS IN COMMITMENT AND NO COMMITMENT CONDITIONS

	<i>Pro-vocabulary Subjects</i>			<i>Anti-vocabulary Subjects</i>		
	<i>Commitment</i> (<i>N</i> =27) (1)	<i>No Commitment</i> (<i>N</i> =26) (2)	<i>t</i> (3)	<i>Commitment</i> (<i>N</i> =16) (4)	<i>No Commitment</i> (<i>N</i> =22) (5)	<i>t</i> (6)
Belief scores:						
A. Pre-test	(-.42)*	-.42		(-3.00)*	-3.00	
B. Post-test	+2.59	+1.38	2.29 ^a	-1.63	+0.05	2.24 ^a
C. Delayed post-test	+2.04	+1.46	1.18	-1.69	+0.77	3.23 ^b
<i>t</i> (B-A) †	4.39 ^o	2.94 ^b		2.62 ^a	6.65 ^o	
<i>t</i> (C-A) †	3.74 ^o	3.50 ^b		2.25 ^a	7.29 ^o	
Behavior scores:						
D. Pre-test	(3.46)*	3.46		(2.00)*	2.00	
E. Post-test	4.37	3.65	2.03 ^a	2.31	3.36	2.19 ^a
F. Delayed post-test	4.81	3.38	3.42 ^b	2.38	2.86	0.85
<i>t</i> (E-D) †	2.60 ^a	0.60		0.76	3.53 ^b	
<i>t</i> (F-D) †	3.32 ^b	-0.32		0.72	2.66 ^a	

* These are the mean pre-test scores for the corresponding subsample of the No Commitment condition. They were used to calculate the amount and significance of change in the Commitment condition subsamples.

† In the Commitment subsamples, *t*'s are for differences between independent means; in the No Commitment subsamples, *t*'s are for differences between correlated means. The different tests were necessitated by the fact that only subjects in the No Commitment condition had been pretested.

^a *p* < .05. ^b *p* < .01. ^o *p* < .001, two-tailed.

pro-vocabulary No Commitment subjects are a bit puzzling, in that they indicate approximate neutrality between history and vocabulary rather than favorableness to vocabulary. Possibly, the findings mentioned above would not have resulted with other subsample selection procedures. It would have been possible, for example, to select subsamples on the basis of either belief pre-test data alone or behavior pre-test data alone instead of the combination of the two types of data that was used. These alternative subsamples were not presented, since they had two undesirable features: (1) A pro-vocabulary sample selected on the basis of the belief pre-test alone was not pro-vocabulary on the behavior pre-test, and vice versa. (2) Also, the proportion of subjects in the pro-vocabulary subsample selected on the basis of either the belief or behavior pre-test alone would have been substantially smaller than the proportion of pro-vocabulary subjects in the Commitment condition. It is reassuring, in any case, to note that when analyses similar to those in the table were done with each of these al-

ternative subsample selecting procedures, the same pattern of results was obtained—namely, belief change but no behavior change in the anti-vocabulary Commitment subsample and more extreme reactions following the communication in the two Commitment subsamples than in the corresponding two No Commitment subsamples.

Implications. Primarily, the theoretical significance of the present findings consists in their offering a means of reconciling previously discrepant findings. It was mentioned earlier that Festinger⁹ has cited a variety of evidence indicating that behavior change does not necessarily follow upon the change of relevant beliefs. It may now be suggested that such failures to obtain behavior change, *when belief change has occurred*, can result from a prior commitment opposing the influence attempt. Although the studies cited by Festinger did not explicitly require the subjects to commit themselves in any way, still the behavior changes that were demanded in those studies were definitely in opposition to established behavior patterns of the subjects. Since these established behavior patterns may have been functionally similar to the commitment procedure used in the present study, their failure to change following belief change is no longer problematic.

The present findings also have relevance to previous work in which it was found that commitment to an opinion increases that opinion's resistance to change.¹⁰ It seems proper, now, to extend this relationship between commitment and resistance to change beyond the domain of opinions, attitudes, and beliefs and into the domain of behavior. The findings, in fact, suggest that the inertia (or tendency to resist change) of behavior following commitment is greater than the inertia of belief in the communication situation. It seems quite meaningful—returning now to the questions posed at the start of this paper—to consider the smoking habit that persists despite irrefutable evidence of its harmfulness, and the neurotic symptom that persists in the face of the patient's understanding, as instances of this sort of behavioral inertia.

We must observe, however, that when the change-inducing force is a behavioral incentive rather than a persuasive communication, a different picture may develop. Suppose, for example, that, instead of being exposed to a persuasive communication, the junior high school students in the present study had been offered a penny for each vocabulary problem they chose on the behavior post-test. Under these conditions, we would expect that a rather marked pro-vocabulary trend would be shown on the *behavior* post-test, with no change on the *belief* post-test. Unpublished data collected by the author show exactly

⁹ *Op. cit.*

¹⁰ E.g. J. W. Brehm and A. R. Cohen, *Explorations in Cognitive Dissonance*, New York, Wiley, 1962.

this pattern of results.¹¹ Thus, whereas there is behavioral inertia in the opposing-commitment-prior-to-persuasive-communication situation, there is belief inertia in the behavioral-incentive situation.¹²

We are left up in the air as to the nature of the underlying relationship between belief and behavior. It seems clear, at least, that there is no *automatic* relationship between them. The data show that the occurrence of behavior change does not depend upon the prior occurrence of belief change, and vice versa. Our safest hypothesis as to the relationship between belief and behavior is that there is, in fact, no relationship; rather, belief and behavior may be independently determined by the environment. Normally, the environment will have parallel effects on belief and behavior, so that they will appear to be correlated. However, in special situations, such as persuasion following an opposing commitment or the offering of a behavioral incentive, the environment exerts differential pressures on belief and behavior and then they appear to be uncorrelated.

At the moment, it appears that the only simple way to account for these special situations is to imagine (contrary to common sense) that belief and behavior may, indeed, be independent. In order for future research testing this "independence" hypothesis (or alternative hypotheses) to be meaningful, it will be necessary for the researcher to be quite explicit about his use of the term "belief." Ideally, one might like to distinguish "true" (unobservable) belief from "stated" (observable) belief, with the understanding that stated belief is a form of verbal behavior assumed to measure true belief. The reader will quickly appreciate that the assumption that true belief can be measured via the medium of verbal behavior rests upon the supposition that (true) belief and (verbal) behavior are *not* independent of each other! With such a conception of "true" belief, we could not test the "independence" hypothesis without assuming that it was false, nor could we test alternative ("nonindependence") hypotheses without assuming that they were (at least in part) true! It should be clear, then, that in order for future research in this area to be meaningful, it will be necessary to conceive of "belief" as a term designating a delineated set of verbal *behaviors*. The present point of view is that it would be most appropriate to use "belief" to refer specifically to the set of statements about the desirability of performing some action.

¹¹ A. G. Greenwald, "Value Change and Its Effects on Behavior," Cambridge, Mass., Harvard University, 1963, unpublished Ph.D. dissertation.

¹² Despite appearances, the persuasive-communication and behavioral-incentive situations are not mirror images of each other. The persuasive communication *can* produce some lasting changes in both belief and behavior, while the behavioral incentive seems to produce no lasting changes; in the author's research (*ibid.*), as soon as the behavioral incentive was withdrawn, behavior scores reverted to their original (pre-incentive) levels.