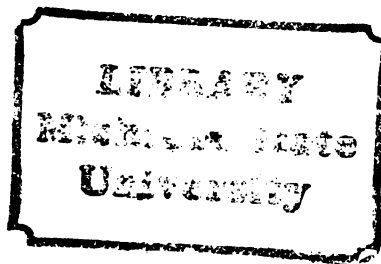


THE EFFECTS OF DIFFERING STRENGTHS
OF REWARD AND PUNISHMENT
JUSTIFICATIONS ON ATTITUDE CHANGE
FOLLOWING COUNTERATTITUDINAL
ADVOCACY

Thesis for the Degree of M. A.
MICHIGAN STATE UNIVERSITY
DAVID CHARLES BENDER
1973

THESIS





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ABSTRACT

THE EFFECTS OF DIFFERING STRENGTHS OF REWARD AND PUNISHMENT JUSTIFICATIONS ON ATTITUDE CHANGE FOLLOWING COUNTERATTITUDINAL ADVOCACY

By

David Charles Bender

To test the experimental hypotheses that (1) persons threatened with mild punishment for failing to engage in counterattitudinal advocacy will demonstrate more attitude change in the advocated direction following counterattitudinal advocacy than will persons threatened with strong punishment, and (2) persons offered a large reward for engaging in counterattitudinal advocacy will demonstrate more attitude change in the advocated direction following counterattitudinal advocacy than will persons offered a small reward, intact groups of high school juniors registering high favorable attitudes toward the career option "attend a college or university" were assigned to experimental and control conditions. Subjects in experimental conditions were induced to counterattitudinally encode under conditions of low reward, high reward, mild punishment, and strong punishment justifications. Post-encoding attitude measurement scales were then administered to subjects in the experimental conditions. Subjects in the control group were administered only the pretest and posttest measures. Analyses of variance of attitude change scores showed no significant differences

David Charles Bender

among groups. Thus, neither experimental hypothesis was supported.

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David Charles Bender

A THESIS

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the Master of Arts degree.

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CHAPTER I

INTRODUCTION¹

To be induced to engage in behavior inconsistent with one's beliefs or attitudes is to engage in forced compliance. A more specific case of forced compliance is counterattitudinal advocacy, which occurs when one is induced to encode a communication discrepant with one's beliefs or attitudes. Counterattitudinal advocacy has been shown, in scores of studies, to be a consistently effective persuasive tool; that is, after people engage in the belief- or attitude-discrepant encoding, their beliefs or attitudes are modified from those held prior to the encoding, toward the position advocated in the communication.

One of the variables thought to affect the effectiveness of counterattitudinal advocacy is the strength of the justification to engage in the counterattitudinal encoding. Justification to encode is defined as the reward offered for encoding, or the punishment threatened for not encoding counterattitudinally.

Festinger (1957) wrote that

. . . the magnitude of the reward or punishment, that is, the attractiveness and desirability of the offered reward or the unpleasantness and undesirability of the threatened punishment, is an important determinant of the magnitude of dissonance which exists once compliance is exhibited (p. 91).

More specifically, Festinger wrote, "[t]oo great a reward or punishment will result in only little dissonance (p. 91)"; and, "[a]s the promised reward, or threatened punishment, becomes smaller in importance, the dissonance resulting from compliance increases (p. 91)."

The result of these differing magnitudes of dissonance, according to Festinger's cognitive dissonance formulation, is that,

[i]f forced compliance has been elicited, the dissonance may be reduced by changing private opinion to bring it into line with the overt behavior or by magnifying the amount of reward or punishment involved (1957, p. 264).

Counterattitudinal advocacy, seen from the cognitive dissonance perspective, then, is effective when dissonance is reduced by a change of private opinion; and since greater dissonance leads to more dissonance reduction, dissonance proponents would advise users of counterattitudinal advocacy as a persuasive tool to make the induction to encode "smaller in importance" as a cognition, or, ideally, "just barely enough to elicit the desired behavior or overt expression (Festinger, 1957, p. 91)."

In summary, Festinger's cognitive dissonance theory predicts that, as the magnitude of justification (reward or punishment for encoding counterattitudinally) decreases, cognitive dissonance will increase, and as cognitive dissonance increases, the probability of reduction of dissonance by changing one's attitudes increases.

It is readily apparent that Festinger makes the same prediction for two different cases: he predicts that magnitude of justification, whether reward or punishment, will lead to attitude change according to its strength; thus, the offer of a reward "just barely enough to elicit

the desired overt behavior or expression (p. 91)" should lead to as much attitude change as the threat of a punishment "just barely enough to elicit the desired overt behavior or expression (p. 91)." Conversely, the threat of a strong punishment should lead to no more or less attitude change than the offer of a large reward, assuming the strengths of punishment and reward are operationally equivalent for the individual.

Festinger and Freedman (1964), discussing developing and modifying moral values, wrote

. . . that the punishment variable is not crucial. Variation in rewards ought to produce the same effects . . . very large promised rewards should be similar to severe threats in terms of attitudinal consequences. . . . Small rewards which effectively restrain behavior would be similar in their effects to mild threats (p. 230).

Freedman (1965) adds

. . . inculcating moral values will be most successful if a minimal amount of justification of any kind is offered for the relevant behavior (p. 154).

In support of this proposition, Festinger (1957) reports the results of two studies,

. . . jointly designed so that all groups were run identically except that in the experiment by McBride (1954) there was an offer of reward for compliance, in the experiment by Burdick (1955) there was a threat of punishment for noncompliance, and in the control groups there was neither offer of reward nor threat of punishment (p. 88).

Subjects demonstrating forced compliance behavior leading to private attitude change in the reward condition numbered about 9 (7%; n=135), and subjects demonstrating forced compliance behavior leading to private attitude change in the threat condition numbered about 7 (6%; n=124). No subject in the control condition (n=116) demonstrated

forced compliance behavior leading to private attitude change.

Festinger's conclusion based on these data is weak, due not only to the small number of subjects demonstrating attitude change after forced compliance, but to other methodological weaknesses of the research as well: only 21%, 18%, and 3% of the subjects in the reward, punishment, and control conditions, respectively, were induced to perform forced compliance communication behavior at all. These small percentages suggest subject self-selection may have been allowed to operate. The level of measurement was nominal; there was no attempt to manipulate degrees of strength of the promises of reward or of the threats of punishment, nor was there any attempt to measure the perceived strengths of the justification manipulations.

The present researcher has unearthed no other research that has attempted to test the proposition that reward and punishment inductions to counterattitudinally encode will be equally--or differentially, for that matter--effective; nor has he found other previous research that tests the proposition that punishment justification for counterattitudinal advocacy will lead to attitude change. Seemingly, then, no reliable test of the efficacy of punishment justifications in the counterattitudinal advocacy paradigm exists.

Brehm and Cohen (1962) assert that,

On the whole there is extremely little evidence relevant to negative choices. One reason for the lack of evidence is, no doubt, that a negative choice is difficult to create experimentally. Volunteers cannot easily be put into a negative choice situation, for, if they know what they are getting into, the choice cannot be more negative than their positive motivation to volunteer, and if they do not know what they are getting into, then other factors, such as the

subject's hostility toward the experiment and experimenter, and the apparent plausibility of the situation, must be taken into account. In this connection we suspect that relatively little is known about the psychological consequences of coercive inducing forces (pp. 49-50).

There are examples of research done to examine the effects of negative choices in non-counterattitudinal advocacy forced compliance situations (c.f., Brehm and Cohen, 1959b, inconclusive; Mills, 1958, dissonance finding; Brehm, 1962, strong dissonance finding, but $n=20$). Cohen and Brehm (1962), in the context of testing the effect of the volition (perceived choice) variable, manipulated levels of coercive (threat of punishment) inducements to perform a dull task. The dependent variable was reported satisfaction, and the results indicated that volition was a stronger determinant of satisfaction than level of coercion.

A series of tests of the dissonance-based proposition that levels of threat will affect evaluation of forbidden behavior differentially (Aronson and Carlsmith, 1963; Freedman, 1965; Brehm and Cohen, 1959a; and Turner and Wright, 1956) have supported dissonance-derived hypotheses.

The point to be made in light of this research is that none of it, save the Burdick and McBride studies reported by Festinger (1957), is a test of the punishment manipulation in the counterattitudinal advocacy paradigm. Indeed, none is a communication experiment; rather, the research tests the effects of punishment on forced compliance and attitude change in other behavioral contexts.

Counterattitudinal advocacy literature is replete with studies testing the cognitive dissonance theory hypothesis that amount of promised reward justification for belief- or attitude-discrepant encoding

behavior is inversely related to amount of attitude change subsequent to the encoding.

Three landmark studies will be discussed here, in an attempt to explicate the issues and controversies surrounding this proposition. The first study was done by Festinger and Carlsmith (1959). Subjects were paid \$20 in the high reward justification condition, and one dollar in the low reward justification condition. The counterattitudinal advocacy task involved telling another supposed subject (actually an experimental confederate) that a task which the subject had performed was interesting. Following the encoding, subjects were asked to rate the task; subjects' attitudes toward the dull task were significantly more favorable in the low reward justification condition than in the high reward justification condition.

Cohen (1962) paid subjects 50¢, one dollar, \$5, and \$10 to counterattitudinally encode messages in favor of unpopular local police actions. There were no significant differences between the \$10 and the \$5 groups, but the one dollar and the 50¢ groups recorded more post-encoding attitude change than the control group and more than the \$10 and the \$5 groups. Additionally, the 50¢ group recorded significantly more attitude change than the one dollar group.

Both these studies, then, were interpreted as supportive of the dissonance theory proposition that there is an inverse relationship between the amount of reward justification and the amount of attitude change.

Rosenberg (1965), on the heels of objection and counter-objection about these findings, proposed an alternative explanation. Drawing on

the arguments of Chapanis and Chapanis (1964), he suggested that subjects promised very high rewards as justification for counterattitudinal advocacy may experience "evaluation apprehension" (p. 29), which, in turn, may lead to the subject perceiving the experiment as a test of his honesty, or to the subject disliking or distrusting the experimenter because of what he perceives as the experimenter's attempt to hoodwink him. And, Rosenberg argues, attitude change in very high reward justification circumstances, then, could hardly be expected. Rosenberg's interpretation of Festinger and Carlsmith's and of Cohen's findings is that had the high reward justification condition subjects' affect about the experimenter not been colored by "evaluation apprehension," attitude change in those conditions might not have been inhibited.

Rosenberg asserted that evaluation apprehension can be avoided if subjects are unaware that their counterattitudinal advocacy behavior is experimentally related to the measurement of their post-encoding attitudes. Rosenberg attempted to separate the two tasks; counterattitudinal encoding was done for one experimenter in one room, for reward justifications of 50¢, one dollar, or \$5, and the post-encoding attitude measure was completed for another experimenter in another room. Subjects were told the two tasks were unrelated. Rosenberg found no significant differences between the 50¢ and the one dollar groups, but these low reward justification groups reported significantly less attitude change in the advocated direction than the group paid \$5. The low reward justification groups demonstrated more attitude change than a control group.

These findings would not have been predicted by cognitive dissonance theory, but they are consistent with the predictions of another theoretical interpretation of the effects of differing levels of justification on attitude change following counterattitudinal advocacy. The theory, called, variously, incentive theory or conflict theory, is offered by Janis and Gilmore (1965) and Janis (1968). Cogent discussions of the theory, with especial attention to its application to the counterattitudinal advocacy research paradigm, are presented by Elms (1972) and Miller (1973).

The theory's application is limited to circumstances in which the following antecedent conditions obtain:

1. A person must be offered a positive inducement to encode counterattitudinally.
2. The person must perceive no negative incentives at work to confound or to counteract the effects of the positive inducement to encode.
3. The person must counterattitudinally encode.
4. The person must be able to recall or to invent arguments in support of the one-sided message he undertakes to encode.
5. The person must not have a closed psychological set toward his cognitive examination of the advocated position.

If the antecedent conditions do obtain, then the theory makes the following axiomatic predictions:

- A. As positive inducement to encode increases in value, the person will be increasingly probable to think of and to encode all the positive (in the direction of the advocated position) arguments he can,

and to suppress and therefore not encode all the negative (in the direction away from the advocated position) arguments he can. This phenomenon is called "biased scanning" (Janis and Gilmore, 1965, p. 18).

B. As biased scanning increases, salience of the advocated position increases.

C. As salience of the advocated position increases, the probability for acceptance of the advocated position increases.

Thus, when the counterattitudinal advocacy paradigm meets the theory's antecedent conditions, incentive theory predicts that high reward justification will be followed by more attitude change in the advocated direction than low reward justification.

This explanation of justification effects makes the opposite prediction from cognitive dissonance theory, and seems to present a viable explanation for Rosenberg's results. Kiesler, Collins, and Miller (1969) have observed, however, that "[i]t is not altogether clear that dissonance theory and incentive theory make competing predictions" (p. 213), and Miller (1973) has also addressed this issue:

Later research has sought to demonstrate that certain theoretical postures may be complementary, rather than antagonistic; e.g., it has attempted to show that under certain conditions a dissonance effect will occur; while under others, a conflict theory prediction will prevail (pp. 129-130).

The mainstream of counterattitudinal advocacy research since Rosenberg's study, then, has been aimed at qualifying the applicability of the two theories to the extent of specifying the conditions under which each will explain and predict the effects of differing justifications.

Others have commented that neither theoretical framework seems capable of adequately and completely explaining the relationships between justification for counterattitudinal advocacy, counterattitudinal advocacy itself, and attitude change following counterattitudinal advocacy. Crano and Messé (1970) found empirical evidence of an immediate dissonance effect following belief-discrepant encoding, which gave way to an incentive effect after a short (20 minute) time lag. Rossomando and Weiss (1970) provided empirical support for their contentions that dissonance and incentive explanations are differentially powerful depending on the timing of rewards and on the presence or absence of reinforcement for the counterattitudinal encoding behavior.

Other researchers who have attempted to demonstrate the compatibility of the two theoretical approaches by examining counterattitudinal advocacy relationships in the presence of other variables are Miller and McGraw (1969), commitment to encode vs. actual encoding; Carlsmith, Collins, and Helmreich (1966), face-to-face vs. anonymous encoding; Linder, Cooper, and Jones (1967), amount of decision freedom; Collins and Helmreich (1965), size of audience for message; Helmreich and Collins (1968), level of commitment to position; Nel, Helmreich, and Aronson (1969), committed audience vs. uncommitted audience; and Siegel (1969), dogmatism.

Hypotheses

The purpose of the present research was to test for differential effects of high and low reward justifications and strong and mild punishment justifications on attitude change following counterattitudinal advocacy.

Hypothesis 1: Persons threatened with mild punishment for failing to engage in counterattitudinal advocacy will demonstrate more attitude change in the advocated direction following counterattitudinal advocacy than will persons threatened with strong punishment.

This hypothesis is derived from cognitive dissonance theory. It is hypothesized that the cognitions, "I believe X," and, "I am encoding not-X," will produce more dissonance, and thus be followed by more attitude change, when the additional cognition, "I am doing this to avoid only a mild punishment," is present, rather than the additional cognition, "I am doing this to avoid a strong punishment." In addition, this researcher holds that punishment justification for counterattitudinal advocacy, whether strong or weak, does not meet one of the antecedent conditions necessary for the application of incentive theory: incentive theory appears to be applicable only in situations where positive inducements to counterattitudinally encode are used (see antecedent condition #1, above). Janis and Gilmore (1965) point out that "[a]gain in attitude change would not be expected, however, if resentment or other interfering affective reactions were aroused by negative incentives in the role-playing situation" (p. 18). (emphasis Janis and Gilmore's)

Hypothesis 2: Persons offered a large reward for engaging in counterattitudinal advocacy will demonstrate more attitude change in the advocated direction following counterattitudinal advocacy than will persons offered a small reward.

This hypothesis is derived from incentive theory. The antecedent conditions for this theory to be applicable should be met.

A replication of Rosenberg's results is predicted by this hypothesis, even though the type of justification manipulated in the present study (grades) is different from Rosenberg's (money). Other empirical support for this incentive theory prediction has been provided by Janis and Gilmore (1965) and by Elms and Janis (1965).

Taken together, these two hypotheses predict an interaction effect: when the justification for engaging in counterattitudinal advocacy is a threat, it is predicted that a mild threat will be followed by more attitude change than a strong threat of punishment; while, when the justification for encoding is manipulated as a reward, a large reward will, it is predicted, be followed by more attitude change than a small one. Stated another way, in the form of a recommendation for a potential user of counterattitudinal advocacy, if punishment is to be used as justification for encoding, it should be a small one; if reward is to be used, it should be a large one.

CHAPTER II

PROCEDURES

Overview

Intact groups of high school juniors registering high favorable pretest attitudes toward the career option "attend a college or university" were assigned to control and experimental conditions. Ss in experimental conditions were induced to counterattitudinally encode under conditions of low reward, high reward, mild punishment, and strong punishment justifications. Post-encoding attitude measurement scales were then administered to Ss in the experimental conditions. Ss in the control condition were administered only the pretest and the posttest measures.

Subjects

It was reasoned that many high school juniors have attitudes and ideas about what they might do after graduating from high school, but that few, if any, of them have made behavioral commitments to a particular career; that is, they have usually not applied for permanent jobs or applied for admission to colleges or trade schools. Still, they know that a decision point is approaching. The original sample, then, comprised all 11th grade students (about 315) at a high school near Flint, Michigan.

Pretest

All Ss were administered the pretest questionnaire (see Appendix A) in their homerooms by the homeroom teachers.² The source of the questionnaire was ostensibly the school's Counseling Department. The questionnaire consisted of four general career options, each followed by five, seven-interval semantic differential-type scales bounded by the adjectives good-bad, pleasant-unpleasant, nice-awful, valuable-worthless, and positive-negative (Osgood, Suci, and Tannenbaum, 1957). For each general career option, the five scales were summed (with 1, low; 7, high). Two hundred twenty-one Ss completed the pretest questionnaire. The "attend a college or university" career option yielded the most highly skewed distribution and was selected as the counterattitudinal issue. One hundred fifty-two Ss who scored from 26 to 35 were considered highly favorable toward the issue "attend a college or university."

Independent Variables

Two independent variables were manipulated:

1. Valence of Justification for Counterattitudinal Advocacy.
Both promise of reward and threat of punishment justifications were manipulated in the study.
2. Strength of Justification for Counterattitudinal Advocacy.
Both high and low degrees of reward and of punishment justification were manipulated in the study.

Manipulation of Independent Variables

Eight days after the pretest measure had been administered, Ss in the experimental conditions were induced, in their American history classes, to encode belief-discrepant messages on the counterattitudinal topic.³ The classes were not randomly assigned to experimental and control conditions, but rather were assigned to conditions to equalize the number of subjects in conditions and to provide for each of the five American history teachers to remain consistent over all his or her classes with regard to the justification of which he or she was the ostensible source. The E distributed instructions for the encoding task, including the justification inductions. The instructions were read aloud by E.

The justification induction manipulation was inserted into a set of common instructions. The instructions common to all experimental groups were as follows:

Write a well-organized, convincing set of arguments against attending a college or university. Your arguments should be an attempt to convince a person like yourself that he or she should not attend a college or university.⁴ The more convincing your arguments, the better. Do not include any positive information or arguments about colleges or universities, or about attending a college or university; include only the disadvantages you can think of. You should do your best to convince the reader of your arguments that he or she should not go to college.⁵

I have discussed this task with all the teachers whose classes are involved. Some teachers have decided to consider this a regular class assignment complete with grades, and some others have decided to consider completion or noncompletion of the task not as an assignment, but only as a slight factor in students' evaluations for this marking-period.⁶ [The justification induction manipulation was inserted here.]

Use the strongest negative arguments you can think of, and use as many good arguments as you can.

You will have about 25 minutes to complete this task. In that time, you should be able to fill more than two sides of the paper attached to these instructions.

Name _____

The justification induction manipulations inserted into the set of common instructions, in each condition, were as follows:

In the high reward justification condition,

. . . . [teacher's name] has told me that this task is to be considered a regular class assignment, and that he [she] will award an extra grade of A in this marking-period to those students who complete this task according to these instructions. . . .

In the low reward justification condition,

. . . . [teacher's name] has told me that, while this task cannot be considered a regular class assignment, and that while he [she] cannot assign any extra-credit value to this task, he [she] will consider your cooperation positively when assigning you your grade for this marking-period, if you complete this task according to these instructions. . . .

In the strong punishment justification condition,

. . . . [teacher's name] has told me that this task is to be considered a regular class assignment, and that he [she] will add an extra grade of E to the grades of those students who fail to complete this task according to these instructions. . . .

In the mild punishment justification condition,

. . . . [teacher's name] has told me that, while this task cannot be considered a regular class assignment, and that while he [she] cannot assign any extra-credit value to this task, he [she] will consider your non-cooperation negatively when assigning you your grade for this marking-period, if you fail to complete this task according to these instructions. . . .

Ss were told to begin. After 25 minutes Ss were told to stop writing.

Posttest

Posttest questionnaires were distributed immediately after Ss had stopped writing. The posttest was comprised of the same five, seven-interval semantic differential-type scales used in the pretest. Only the counterattitudinal issue "attend a college or university," was measured. Scales were arranged vertically in an attempt to mask their identity with the pretest attitude scales. The posttest questionnaires were mimeographed, while the pretest questionnaires had been dittoed, in a further attempt to dissociate the two questionnaires from each other. (See Appendix B)

Dependent Variables

Attitude change, measured as the difference between Ss' pretest scores and Ss' posttest scores, was the major dependent variable.

Counterattitudinality of message and persuasiveness of message were measured as supplementary dependent variables. Attitude change scores were also analyzed for differences between males and females.

Debriefing of Subjects

Ss were read a brief description of the purposes of the research, of the deceptions that had occurred during the research, and of their roles in the experiment. No S was punished or rewarded for his or her cooperation or non-cooperation with the E.

CHAPTER III

RESULTS

Pretest

A simple analysis of variance of the pretest attitude scores provided no evidence of differences among the experimental and control groups.* (See Table 1)

Table 1. Means, Standard Deviations, and Simple Analysis of Variance of Pretest Attitude Scores on the Counterattitudinal Issue for Control and Experimental Groups.

Condition	Mean	Standard Deviation		
High Reward	31.76	2.98		
Low Reward	32.00	3.14		
High Punishment	32.83	2.97		
Low Punishment	32.40	3.23		
Control	32.50	3.02		

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>F</u>
Between	19.07	4	4.77	< 1 n.s.
Within	1186.72	126	9.42	
Total	1205.79	130		

Another simple analysis of variance of the pretest attitude scores provided no evidence of differences among the twelve intact

*The level of significance for all tests was set at $p < .05$.

groups. ($F_{11,119} < 1$)

Tests of the Hypotheses

As shown in Table 2, no significant differences were found among change scores in experimental or control groups. That is, the mean attitude change score of no experimental group differed significantly from the mean attitude change score of the control group or from that of any other experimental group. No further tests for differences between group means were warranted. (McNemar, 1969, p. 323)

Table 2. Mean Pretest and Posttest Scores, Mean Attitude Change, and Simple Analysis of Variance of Attitude Change Scores for Control and Experimental Groups.

Condition	Pretest Attitude Scores	Posttest Attitude Scores	Attitude Change Scores
High Reward	31.76	29.12	-2.64
Low Reward	32.00	28.57	-3.43
High Punishment	32.83	30.41	-2.41
Low Punishment	32.40	31.11	-1.30
Control	32.50	31.32	-1.18

<u>Source</u>	<u>SS</u>	<u>df</u>	<u>MS</u> <u>F</u>
Between	93.11	4	23.28 1.90 n.s.
Within	1544.54	126	12.26
Total	1637.65	130	

A two-way analysis of variance was performed on the attitude change scores of the experimental groups to test for differential effects of reward and punishment justifications across strengths of justification, and to test for differential effects of high and low justifications across justification valence (as suggested by Festinger, 1957; see INTRODUCTION), and to test for interaction effects.

The results, shown in Table 3, demonstrated no main effect of either variable across the other, and no interaction effect. Thus, neither of the experimental hypotheses was supported.

Table 3. Two-Way Analysis of Variance of Attitude Change Scores of Experimental Groups.

Source	SS	df	MS	F	
Valence	1.39	1	1.39	2.98	n.s.
Strength	0.03	1	0.03	< 1	n.s.
Interaction	0.90	1	0.90	1.93	n.s.
Error	49.00	105			
Total	51.33	108*			

* df = 108, which reflects the absence of the control group from the analysis.

Supplementary Analyses

A sample of counterattitudinal messages was randomly drawn from those written by subjects in experimental groups, and each was blindly rated by a friend of the experimenter on two criteria: counterattitudinality and persuasiveness. The former criterion was met by all sampled messages; each was judged to be counterattitudinal. The persuasiveness criterion was measured on a scale ranging from 0, not at all persuasive, to 10, very persuasive. Analysis of these ratings revealed no significant differences between the experimental groups in the persuasiveness of their counterattitudinal messages.

Analysis of attitude change scores revealed no significant differences in attitude change scores associated with sex of subjects.

Three-way (strength, valence, and sex of subject) analysis of variance of attitude change scores revealed no significant main effects and no significant interactions, although, with the variance

attributable to sex of subject accounted for, the interaction between strength and valence fell only slightly short of significance

($F_{1,99} = 3.65$).

CHAPTER IV

DISCUSSION

The results of the study clearly show that not only were neither of the experimental hypotheses supported, but also that no statistically significant differences in attitude change were demonstrated between any two experimental groups or between any experimental group and the control group. As a colleague told about these results aptly put it, "The only significant difference in the study is the difference between its findings and the findings of two hundred other counterattitudinal advocacy studies."

The purpose of this discussion section is to examine the problems that arose or that may have arisen in the study, to describe the steps taken to overcome these problems, and to speculate as to the possible effects of the failure to forestall them.

These problems have been divided into three general categories: problems with the experimental design, problems associated with the general lack of attitude change, and problems associated with the manipulation of the strength of justification variable.

The Experimental Design

In this section, some problems associated with the intact groups design of the study and with related situational aspects of the

research will be discussed. Comment about the attempts to overcome these problems will be made, along with some discussion of the possible consequences of the failure to overcome the problems.

Any experimental design using intact groups must attempt to demonstrate that there is no evidence of initial (pre-manipulation) differences among the experimental groups which might later influence the criterion measure differentially. The analysis of variance of pre-test attitude scores of the twelve intact groups demonstrates the tenability of this assumption, as does the analysis of variance of the differences among the four experimental groups and the control group. However, it must be clearly stated that these analyses showed only that there was no evidence that the groups were different on relevant variables; that is, these analyses did not show that the groups were the same on relevant variables. As a matter of fact, given the likelihood of differences in teaching styles and the expectations that teacher behaviors generate among students, it is not at all unlikely that the interaction of these differences with the induction treatments made for the unaccounted-for differences in perceptions of rewards and punishments, since the teachers were the ostensible sources of the rewards and punishments.

Since intact groups were run throughout the day, it is also possible that at least some individuals in groups run late in the day had heard that the experiment was being conducted in the American history classes. No attempt was made by the researcher to mitigate this possibility; it was accepted as an artifact of the experimental situation. This may have affected the results in three ways:

1. Some subjects in later groups may have had the opportunity to rehearse their counterattitudinal messages.

2. Some subjects may have asked others for ideas about arguments to use in writing their messages, in effect eliminating the self from the self-persuasion paradigm.

3. Some subjects, having heard the task described, may not have listened to or read the instructions carefully, feeling that they already knew what the task involved. This may have lowered the effectiveness of the instructions as an experimental device for eliciting role-playing communication behavior.

To the extent that members of different American history classes were told about the experiment before they participated in it, the results may have been affected differentially. Since the classes composing the experimental conditions and the control group were distributed fairly evenly throughout the day, it was reasoned that, although information might be obtained before the experimental sessions, possibly influencing the encoding behavior and the attitude reporting behavior of the subjects, it would be distributed relatively equally across conditions, and would not present a serious problem in interpretation of the results. For this reason the researcher is less concerned about this problem affecting groups differentially than about the possibility that it may have contributed to the general lack of attitude change across groups. The latter problem is discussed below.

Since as many as three intact groups had to be run simultaneously the experimenter was not present during the entire time the subjects were encoding their counterattitudinal messages. The teachers of the

American history classes were present, but some lack of experimental control may have resulted from students discussing the task among themselves during the encoding period. Again, any such effect would have been somewhat evenly distributed among groups.

There is an additional control problem that would seem difficult to overcome not only in the intact groups situation, but in any situation in which subjects are not treated individually: subjects were given twenty-five minutes to encode their counterattitudinal messages. During that time, some subjects may have used the first five minutes in actual encoding and examination (biased scanning) of the topic, and then spent the next twenty minutes reading a book or discussing some topic unrelated to the counterattitudinal issue with another subject, who may, in turn, have been distracted from his or her own encoding task. But all subjects were administered the posttest at the end of twenty-five minutes. So the Crano and Messé (1970) results could have been replicated in the present study but have been obscured by the time lag between completion of encoding and administration of the posttest. The lack of experimental control of amount of information encoded and of the length of the post-encoding incubation period should have been comparably distributed among all subjects in all experimental groups.

Along this same line, subjects could have used the time between encoding and their completion of the posttest to invent further, non-encoded arguments or to discuss with other subjects arguments pertinent to the counterattitudinal issue. Neither of these possibilities was subjected to either control or measurement by the experimental design. Both would have been distributed equally among subjects and groups.

In summary, several problems, most related to lack of experimental control, were introduced by the experimental design and the situation surrounding the experiment. These problems were probably evenly distributed among the experimental and control groups, but they may have contributed to the general lack of attitude change in all experimental conditions.

The Lack of Attitude Change

Perhaps the most striking non-result is the failure of any of the manipulations to be followed by much attitude change. As mentioned earlier, counterattitudinal advocacy has been shown to be a powerful persuasive tool, and a host of studies bear out this contention, as witness the sheer number of studies in the area reporting significant changes in attitudes.

The lack of attitude change in any condition in the present study may be in part attributable to the contrast presented to the subjects by an experimenter who introduced himself as a college student asking subjects to encode anti-college attendance communications. This may have resulted in some experimenter demand characteristics (c.f., Orne, 1962): that is, subjects may have thought they knew that the experimenter actually felt that attending a college or university was a desirable behavior, since it was clearly one of his behaviors. Subjects could further have tried not to be distracted by their counterattitudinal arguments, and could have attempted to "help" the experimenter by indicating on their posttest attitude measures what they thought they were certain the experimenter wanted them to indicate. Kelman (1958) found that, under conditions of surveillance, subjects will express opinion

change in the direction of the supposed opinion of an authority. This kind of effect could have inhibited attitude change in the present study, since the experimenter was present at all times during the administration of the posttest.

This seeming contradiction could have had another confounding effect. Janis (1968) hypothesized

. . . that when people are uncertain about the covert intentions of someone who is trying to induce them to advocate a new policy, their suspicion that they are being manipulated will be aroused and will interfere with their open-minded exploration of the cognitions that might lend support to the new policy. Under these conditions, a strong inducement--whether in the form of money, social pressure, or the threat of a penalty--would be relatively ineffective; whereas a milder inducement, which makes for more open-minded exploration of new considerations, could result in more gain from biased scanning and hence produce more attitude change (pp. 815-816).

Given the already-noted experimenter's behavior/request contradiction, and given that the experimenter gave no more specific information to the subjects than that he was "doing an experiment for a master's thesis," it is not unlikely that this effect could have been operating. If it were, it could well have diminished the effects of both of the high (strong) justification manipulations.

If the subjects were not induced to seriously role play; that is, if the instructions for encoding failed to elicit from the subjects sincere persuasive attempts, then the antecedent conditions for neither dissonance theory nor incentive theory were met. An attempt was made in the instructions to encourage serious role playing. Specifically, the instructions, "Your arguments should be an attempt to convince a person like yourself that he or she should not attend a college or

university," and, "You should do your best to convince the reader of your arguments that he or she should not go to college," were designed to induce subjects to seriously attempt to design a persuasive message. As reported earlier, there were no differences detected among groups in the persuasiveness of the messages. An absolute judgment of the level of persuasiveness of messages would have been of questionable validity, and none was attempted. Among the possible explanations for the general low level of attitude change following the counterattitudinal encoding, the possibility that the subjects did not "get into" their role playing ranks as one of the most likely.

Had the encoding instructions asked the subjects to encode a message containing arguments against their own attendance at a college or university rather than arguments against "a person like themselves that he or she should not attend a college or university," the effects of the counterattitudinal advocacy may well have been stronger.

Janis discusses a potential problem relating to the topic of the counterattitudinal encoding:

It should also be noted that role playing would not be expected to bring about attitude change unless the new incentives that emerge when the subjects engage in biased scanning are powerful enough to create a challenge to their present position. A case in point is the study of Stanley and Klausmeir (1957) in which midwestern isolationists complied with the role playing instructions to give short talks advocating world government, but showed no evidence of attitude change. It would be extremely improbable that, merely by engaging in a bit of biased scanning in a single experimental session, the subjects would generate a new set of incentives sufficiently powerful not only to seriously challenge their present position in favor of U.S. national autonomy but to reject it in favor of the new alternative (1968, pp. 811-812).

If educational aspiration is bolstered by a fairly strongly-held set of beliefs, then perhaps it takes more than one session of counterattitudinal advocacy to shake that belief structure to the extent that measurable opinion change could be recorded.

Still another potential contribution to the ineffectiveness of the inductions to role play may have been made by the experimenter specifying no receiver for the persuasive arguments of subjects. Subjects were told only that the experimenter was doing research for his thesis. No audience for the counterattitudinal essays was specified or described. If the subjects had the notion that the experimenter was to be the only receiver of their messages, then they might well neither have experienced much cognitive dissonance nor have engaged in much biased scanning. There are data which indicate that manipulation of such variables as persuasibility of audience (Nel, Helmreich, and Aronson, 1968) and audience attitude toward the counterattitudinal topic--committed or not committed (Bodaken, 1970) may affect attitude change after encoding. Some manipulation of audience variables along these lines may have made the encoding task a more meaningful one for subjects, and could possibly have been followed by more attitude change.

The Justifications

In a dissonance framework analysis of the counterattitudinal advocacy situation, the relevant cognitions would be three: "I believe X," "I am encoding not-X," and "I am being rewarded (punished) for encoding not-X." If the third cognition is too important in the cognitive relationship, then the magnitude of dissonance produced by its addition will be accordingly low and the resulting attitude change will be

accordingly slight.

Incentive theory predicts that if the incentive (justification) is not important enough, then the biased scanning associated with it would not present a serious challenge to the subjects' initial attitudes, and little attitude change could be expected.

What this suggests for the present study is that the manipulation may not have been important enough, or may have been too important. The individual student's value for grades in general needs to be considered: it was reasoned that, especially among students who indicated highly positive attitudes toward attending a college or university, grades would be fairly highly valued, and that the offer of a high one would be attractive and that the threat of a low one would be perceived as the threat of a strong punishment. It was additionally reasoned that a mere positive or negative consideration of a student's cooperation by his or her teacher would be perceived as neither particularly threatening (in the negative case) nor particularly valuable (in the positive case). But this may not have been the case. Individual student interpretations of the phrases "consider positively" and "consider negatively" may have been either higher or lower than perceptions of extra-credit grades of A or F.

The phrase "slight factor" in the instructions was intended to mitigate any possible importance assigned by subjects to the low reward or to the weak threat of punishment, but in fact some subjects could have assigned positive or negative consideration at the time of final grading as a quite important reward or punishment.

But the factor which has perhaps most persistently plagued counterattitudinal advocacy researchers is the level of justification problem, and that is because people do not hold the same values for the same concepts. Thus, a \$2.00 reward justification may be considered inadequate remuneration for walking across campus to the laboratory by some subjects, while it may be considered a boon by others. This disparity may be even more marked when grades are the medium of exchange. The rationale of the present researcher for choosing high school students as subjects and grades as the valued rewards and punishments was that schools are among the few places where a test could be made of the differential effects of reward and punishment justifications. This is because teachers, along with parents and prison wardens, are some of the very few people who have both reward- and punishment-type means-control over their charges, and schools are some of the even fewer places where one may conduct this type of research. This does not mean that, had any significant differences between reward-type justifications and punishment-type justifications been found in this research, such results would necessarily have been generalizable only to school situations. Future researchers should address some thought to the problem of individual differences in perceptions of levels of justification. This problem may well dictate individual running of subjects, with justifications tailored to each individual's values for a given reward or punishment.

A Miscellaneous Problem

The teacher of the classes that composed the two intact groups making up the control group was absent on the day that the manipulation and the posttest were administered, and, during the second of these

classes, attendance was low. Only three posttest questionnaires that could be matched with pretests were obtained in that class.

Conclusion

Threat of punishment-type justification has not been shown by this study to be either more or less effective than reward-type justification in producing attitude change following counterattitudinal advocacy. Thus, considering the factors in the experimental design and in the operationalizations of the justifications that may have affected the amount of attitude change in the several experimental and control groups, the major research question addressed by this study--what are the differential effects of the reward- and punishment-type justifications?--has been left unanswered.

Future researchers should attempt to use a counterattitudinal topic that allows for a broader range of attitude change about that topic. Mean scale changes of much more than two or three scale units are common in the counterattitudinal advocacy literature. Individual running of subjects with levels of justifications determined by pre-testing would clear up most of the potential procedural problems noted in the present research.

NOTES

¹Although I have recognized the assistance given me by my thesis director and adviser Gerald R. Miller in the ACKNOWLEDGMENTS section of this thesis, it seems appropriate to add, in the body of the thesis, a note of appreciation of his thinking and research and writing and teaching in the area of counterattitudinal advocacy. To recognize by citation the contributions his work has made to my thinking and research would substantially increase the length of this paper. His strong influence is on every page of this thesis. I have included several of his papers in the GENERAL REFERENCES section.

²Homerooms are administrative units which meet for ten minutes at the beginning of each school day. Students are assigned to homerooms by grade level and in alphabetical order. Every 11th grade student at the high school was assigned to one of eleven homerooms.

³All 11th grade students are required to take American history, but two of the 152 subjects who registered highly favorable attitudes toward the counterattitudinal issue had somehow eluded this requirement, and thus were not included among subjects in experimental or control groups. Nineteen of the 150 subjects were not in their American history classes on the day of the administration of the manipulation

and posttest. Thus, $n=131$.

⁴ and ⁵ These sentences were attempts to induce subjects to seriously role play when encoding their counterattitudinal messages.

⁵ Bachman, Bukowski, Forkner, and Peretz (1969) found that the strength of justifications is intensified when subjects know the nature of justifications in other conditions. Brehm and Cohen (1959b) wrote

If an individual feels he has at least some prior choice, increasing relative deprivation results in increased dissonance. . . . In addition, as far as dissonance theory is concerned, differential dissonance even in cases in which persons receive some rewards for engaging in the negative behavior (pp. 385-386).

APPENDIX A

APPENDIX A

Counseling Department Post-Graduation Interests Profile

INSTRUCTIONS: On the next page, in capital letters, are four general categories of career options. Listed beneath each general category are five attitude scales. Complete this questionnaire by marking an X on each of the five scales in the space that best describes your own opinion about each general category.

EXAMPLE: One general category might be art. This would appear in the center of the page in all capital letters, like this:

BECOME AN ARTIST

Below this heading would be five scales, each of which would look something like this:

pleasant ____:____:____:____:____:____:____ unpleasant

So your job would be to mark an X on the space that show where your judgment of how pleasant or unpleasant you feel it would be to become an artist is.

If you feel neutral or have no opinion about becoming an artist, you would place your X in the center space, like this:

pleasant ____:____:____: X :____:____:____ unpleasant

The stronger your opinion about the career option, the farther from the center space your X would be made.

For instance, say you feel it would be very pleasant to become an artist. Your X would be made like this:

pleasant X :____:____:____:____:____:____ unpleasant

If you feel it would be pleasant to become an artist, your X would be marked like this:

pleasant ____: X :____:____:____:____:____ unpleasant

If you feel that becoming an artist would be somewhat pleasant mark your X like this:

pleasant ____:____: X :____:____:____:____:____ unpleasant

The same rule should be followed for the unpleasant side of the scale: the stronger your opinion, the farther from the center space your X will appear. Be certain you mark each of the five scales that appear beneath each of the four general career options on the next page. Mark only one X on any single scale. When you are done, you should have marked 20 X's on the page.

LEARN A SKILLED TRADE

good _____ : _____ : _____ : _____ : _____ : _____ : _____ bad
 negative _____ : _____ : _____ : _____ : _____ : _____ : _____ positive
 pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant
 awful _____ : _____ : _____ : _____ : _____ : _____ : _____ nice
 valuable _____ : _____ : _____ : _____ : _____ : _____ : _____ worthless

VOLUNTEER FOR MILITARY SERVICE

positive _____ : _____ : _____ : _____ : _____ : _____ : _____ negative
 unpleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ pleasant
 nice _____ : _____ : _____ : _____ : _____ : _____ : _____ awful
 worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable
 bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good

OBTAIN PERMANENT EMPLOYMENT IMMEDIATELY

pleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ unpleasant
 awful _____ : _____ : _____ : _____ : _____ : _____ : _____ nice
 valuable _____ : _____ : _____ : _____ : _____ : _____ : _____ worthless
 good _____ : _____ : _____ : _____ : _____ : _____ : _____ bad
 negative _____ : _____ : _____ : _____ : _____ : _____ : _____ positive
 nice _____ : _____ : _____ : _____ : _____ : _____ : _____ awful
 worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ valuable
 bad _____ : _____ : _____ : _____ : _____ : _____ : _____ good
 positive _____ : _____ : _____ : _____ : _____ : _____ : _____ negative
 unpleasant _____ : _____ : _____ : _____ : _____ : _____ : _____ pleasant

APPENDIX B

APPENDIX C

Name _____

I would like to know something about your attitudes on the subject of attending a college or university. Please place a check next to the best description of your own feelings about attending a college or university.

Attending a college or university would be:

- (Check one)
- _____ very good
 - _____ good
 - _____ somewhat good
 - _____ neutral
 - _____ somewhat bad
 - _____ bad
 - _____ very bad

Attending a college or university would be:

- (Check one)
- _____ very unpleasant
 - _____ unpleasant
 - _____ somewhat unpleasant
 - _____ neutral
 - _____ somewhat pleasant
 - _____ pleasant
 - _____ very pleasant

Attending a college or university would be:

(Check one)

- ☐ very awful
- ☐ awful
- ☐ somewhat awful
- ☐ neutral
- ☐ somewhat nice
- ☐ nice
- ☐ very nice

Attending a college or university would be:

(Check one)

- ☐ very valuable
- ☐ valuable
- ☐ somewhat valuable
- ☐ neutral
- ☐ somewhat worthless
- ☐ worthless
- ☐ very worthless

Attending a college or university would be:

(Check one)

- ☐ very negative
- ☐ negative
- ☐ somewhat negative
- ☐ neutral
- ☐ somewhat positive
- ☐ positive
- ☐ very positive

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