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SUCCESS AND AVERSIVE CONSEQUENCES AS DETERMINANTS OF EVALUATIVE AND BEHAVIOR CHANGES AFTER DISCREPANT ROLE PLAYING [1]

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Two studies were conducted to examine the behavior effects of discrepant role playing, and to test the proposition that the production of aversive consequences is necessary for the dissonance-predicted, inverse relationship between amount of inducement and subsequent evaluative change to be obtained. In the first experiment, subjects were enticed for either a low or high monetary incentive to advise three confederates to engage in a dull task for a considerable amount of time by asserting that the task is enjoyable. As expected, subjects evidenced the dissonance-predicted effect only when they were successful in convincing their colleagues. Subjects were also found to engage in the dull task for a longer time after performing a successful act of discrepant role playing. A second study was designed to assess the relative importance of success and aversive consequences in producing the dissonance-predicted effect. All subjects learned that they were successful in convincing their colleagues of the attitude-discrepant position, but for only half did the successful speech produce aversive consequences. The results clearly demonstrate that aversive consequences rather than success is the key determinant of dissonance-predicted evaluative changes. The data further indicate that discrepant role playing is not effective in producing attitude-related behavior change. The results are discussed in terms of dissonance theory, self-perception theory, and response contagion theory.

Recent dissonance theorizing holds that perceived choice (Brehm and Cohen, 1962; Linder, Cooper and Jones, 1967) and the production of foreseeable aversive consequences (Collins, 1969; Cooper and Worchel, 1970; Nel, Helmreich and Aronson, 1969) are necessary for the arousal of cognitive dissonance through counterattitudinal advocacy. This specification of Festinger's (1957; Festinger and Carlsmith, 1959) original formulation of dissonance theory suggests that when one freely chooses to perform an attitude-discrepant act which produces aversive

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[1] The studies reported were conducted at the "Laboratorium voor Experimentele Sociale Psychologie" at Leuven and constitute a first section of the author's doctoral dissertation, in preparation under the supervision of Prof. Dr J. M. Nuttin, jr. The author is highly indebted to Dirk Anthonissen, Machteld Doms, Jos Feys, Johan Hamels, Jozef Janssen, and Norbert Vanbeselaere for their help in the running of the experiments, and to Joe Hatcher for his assistance in correcting the English.
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consequences, one will justify that behavior by changing one's attitude to be more consistent with the overt behavior.

Cooper and Worchel (1970) conducted an experiment to test the role played by aversive consequences in producing dissonance. As in the wellknown Festinger and Carlsmith (1959) experiment, they enticed their subjects for varying incentives to tell a waiting colleague (actually an experimental accomplice) that a dull task was enjoyable and interesting. Consequences were manipulated by having the waiting subject appear either convinced or unconvinced by the subject's counterattitudinal statements. As expected, subjects were found to demonstrate the dissonance-predicted, inverse relationship between amount of incentive and attitude change only when they were successful in convincing the confederate. Cooper and Worchel interpreted their data as support for the position that counter-attitudinal advocacy does not lead to the arousal of cognitive dissonance unless that advocacy results in negative consequences.

Support for the combined influence of choice and aversive consequences on dissonance arousal was further reported by Goethals and Cooper (1972), Hoyt, Henley and Collins (1972), Collins and Hoyt (1972), Calder, Ross and Insko (1973), and Cooper and Goethals (1974). This growing body of research and the earlier forced-compliance studies are interpreted by Collins and Hoyt (1972) as conclusive evidence in support of the aversive consequence hypothesis. Collins' "personal responsibility-for-aversive consequences" formulation, which integrates the choice variable into the personal responsibility notion, is further suggested to provide a basic specification of the conditions under which counterattitudinal advocacy produces enduring changes in both attitudes and behavior. Social psychologists, however, too often like to draw far-reaching conclusions from the forced-compliance research data, without providing the necessary empirical evidence. There is, in fact, no evidence to support the proposition that counter-attitudinal advocacy would be effective in producing behavior and/or enduring attitude change.

Dissonance theory essentially deals with cognitions, their interrelations and a need for cognitive consistency. Research on counter-attitudinal advocacy has thus mainly been concerned with the cognitive consequences of attitude-discrepant role playing rather than with its subsequent effects on post-experimental *overt behaviors*. Dissonance theory, nevertheless, could expect role players to modify their future behavior in the direction of the experimentally elicited behavior in order to maintain cognitive consistency between the new attitude position adopted (as a means of dissonance reduction) and the subsequent attitude-related, overt behaviors emitted. Overt behaviors are more resistant to change than attitude cognitions, however, and research on the consistency between attitudes and overt behavior has demonstrated that the attitude-behavior relationship is generally weak or even non-existing (see Wicker, 1969, for a review). Consequently, one should be rather cautious in postulating that attitude-discrepant

role playing is effective in producing behavior changes unless empirical evidence can be brought to support this position. The present author, however, does not know of any research data concerning the behavior effects of counterattitudinal role playing.

There also is no clear evidence to show that *enduring* attitude change results from attitude-discrepant role playing. On the contrary, an unequivocal test by Nuttin (1975) of the long-term effects of counter-attitudinal advocacy clearly proves that no enduring attitude change is obtained. As in the Collins and Hoyt (1972) study, a repeated measure technique indicated that the effects of the experimental treatment on the advocate's subsequent attitude responses persist for a period of at least five weeks. However, when the subject's post-experimental attitude was assessed for the first time five weeks after the counterattitudinal advocacy, there was not the slightest sign of enduring attitude change. The very specificity of the forced-compliance effect (e.g., Festinger and Carlsmith, 1959; Collins, Helmreich and Carlsmith, 1966; Nuttin, 1975) does not even justify the conclusion that discrepant behavior would be effective in changing *attitudes* at all. In fact, not a complex set of interrelated evaluative cognitions is found to change but only the very cognitions which are directly related to the content of the discrepant verbal statements.

Even the very role of the aversive consequences of discrepant role playing in producing cognitive changes has not been unequivocally demonstrated. Postbehavioral consequences are typically manipulated by having a subject believe that his counterattitudinal speech is either successful or unsuccessful in convincing some unsuspecting person of the position advocated. The presence or absence of postbehavioral aversive consequences thus covaries with a successful or unsuccessful accomplishment of the counterattitudinal role playing. Since positive feedback about the role player's performance has been shown to foster subsequent attitude change (e.g., Scott, 1957, 1959; Goldstein and McGinnies, 1964), pro-dissonance findings might be attributable to the success variable rather than to the aversive consequence manipulations.

Two experiments were conducted to clarify the issue. The studies were especially designed : a. to examine the effects of discrepant role playing upon subsequent attitude-related behavior; and b. to provide an unequivocal test of the role played by aversive consequences in producing the dissonance-predicted, inverse relationship between amount of monetary incentive and subsequent evaluative change.

EXPERIMENT I

The purpose of the first experiment was to replicate the Cooper and Worchel (1970) finding that a dissonance-predicted effect is produced only when a discrepant speech effects an aversive event through successful persuasion of an unsuspecting audience, and also to explore the behavior effects of discrepant role playing. Subjects were enticed

to advise their experimental partners to perform a dull task for a fairly long period by falsely stating that the task was enjoyable. Consequences were manipulated by having half of the subjects learn that their colleagues were convinced by the discrepant statements. The other half of subjects, however, saw their counterattitudinal advice as having no apparent influence on their colleagues' choice of a performance period. Justification for performing the discrepant act was manipulated by offering either a small or high monetary reward. It was predicted that subjects who were successful in convincing their colleagues would come to believe that the dull task was enjoyable as an inverse function of the amount of incentive offered. No such relationship was expected for subjects whose discrepant behavior did not bring about an undesirable state of affairs. In order to explore the behavior effects of the experimental manipulations, subjects also were invited to choose a performance period for themselves. If counterattitudinal role playing is effective in producing behavior changes, the behavior measures should parallel the attitude measures.

METHOD

SUBJECTS

Fifty-four male high-school students (from 16 to 18 years old) volunteered to participate in a two hour during experiment dealing with "group-discussion and group-decisionmaking".

PROCEDURE

Overview. In the context of participating in an experiment on the effects of an expert's advice on a group-decision, subjects played the role of expert and were first induced to perform a dull and monotonous task. Next, subjects were informed that the group (actually three confederates) intended to perform the task for 20 à 25 minutes. Subjects then were offered either 5 BF (Low Incentive) or 50 BF (High Incentive) for telling the group that the dull task was enjoyable and for advising the group to engage in the task for 45 minutes. After subjects had delivered their counterattitudinal advice, they discovered that the group decided to perform the task either for 45 minutes (Success condition) or for 25 minutes (No Success condition). Subjects then anonymously evaluated the task, and chose how long they themselves wished to perform the dull task.

Preliminary instructions. One subject and three confederates were invited for each experimental session. Upon arrival the "group-decisionmaking" experimenter (*E* 1) explained the alleged purpose of the experiment. *E* 1 pretended to be interested in how members of a small group proceed in reaching a preliminary consensus, and how the advice of an expert might contribute to the group's final decisionmaking. After shortly elaborating, *E* 1 explained that they were assigned with the

task of performing a simple attention-test. They first, however, had to decide upon how long to participate in the test. The test was said to be constructed by Mr — (*E* 2) from the Psychodiagnostic Section, who wanted to administer the test to a large number of people over periods varying from 5 minutes, through 10 minutes, 15 minutes, etc... to 50 minutes. The participants, therefore, were said to be completely free in choosing whatever testing period they liked. *E* 1 further explained that one of the four participants would play the role of expert. His task was to first perform the test, and then, as an expert, to recount his impressions and to advise some particular testing-period to the group. The other participants, as a group, first had to make a preliminary decision on a testing period on the basis of a short description of the test, and after receiving the expert's advice, had to make a final and unanimous decision by voting. It was emphasized by *E* 1 that the expert's role was strictly advisory, so that he would not participate in the final group-decisionmaking. Afterwards, however, the expert would have an opportunity to freely choose a testing period for himself. *E* 1 then proceeded to randomly assign the role of expert to one of the four participants. Actually, it was so arranged that the role of expert was always assigned to the only subject present. A first questionnaire, intended to enhance the credibility of the alleged purpose of the experiment, was handed to all participants, and Mr — (*E* 2) was invited by phone to come and administer the attention-test. When the questionnaire had been completed, *E* 1 and the confederates left, supposedly to start the group-discussion in another room.

Task performance. *E* 2 shortly introduced himself and invited the subject to enter a cubicle in order to perform the test. The test was designed to be quite boring, and therefore, to produce for all subjects negative feelings toward performing the test for a long time. The test consisted of a series of sums of five digits (e.g., $3 - 2 + 5 - 4 + 7 = 9$). The sums were read in a monotonous voice (by *E* 2) at the rate of one sum every ten seconds. The task of the subject was to follow carefully the listed sums by headphone, and to press a key each time he thought a given result to be incorrect. About half of the sums were incorrect.

Inducement of counterattitudinal behavior. When the subject had performed the test for 20 minutes, *E* 2 left whereas *E* 1 joined the subject and informed him of the preliminary decision of the group. He introduced the nature of the discrepant role play and offered either the low or high incentive for compliance. *E* 1 said: "Well, I think you have a good idea now of how the attention-test proceeds, and what it is exactly about. The others, in the meantime, have more or less agreed to perform the attention-test for 20 à 25 minutes. As I told you, I am specifically interested in studying the effects of an expert's advice on a group decision. Advice which deviates from the preliminary group-agreement would thus be in my best interests. Therefore, I myself have prepared two advices (while showing them to the subject, he

continues). The first one advises the group to perform the test for 10 minutes, while the other one advises 45 minutes. The group now is spontaneously willing to participate for 20 à 25 minutes, and since I wish to have advice that clearly deviates from their preliminary choice, I would like to ask you to advise 45 minutes. Of course, it is completely up to you to decide, but if you are willing to do it for me, I can give you 5 BF (50 BF respectively). Do you think you can do it ...?" After the subject agreed, he was given the low or high monetary reward. *E* 1 then left the room to allow some opportunity for the subject to rehearse his discrepant advice. The standardized text stated : "Well, after all, it is a rather simple test about which there is not so much to tell. I found it quite enjoyable anyway, and I think it is really worthwhile to perform the test long enough. I therefore propose to perform the test for 45 minutes".

Counterattitudinal behavior and manipulation of consequences. Upon returning with the confederates, the subject was invited by *E* 1 to deliver his advice. After this, the confederates made a final decision by voting. They were instructed to vote first 45, 40, 35 minutes, then 45, 45, 40 minutes and finally 45, 45, 45 minutes in the Success condition. In the No Success condition the voting proceeded from 30, 25, 20 minutes through 25, 25, 20 minutes to 25, 25, 25 minutes. From the beginning it was thus made clear for the subject whether the group was convinced or unconvinced by his statements. After the final decision had been restated by *E* 1, a questionnaire was handed out. The major purpose of this questionnaire was to check the effectiveness of the consequence manipulation. Subjects were asked to indicate on a 17-point scale how strongly or weakly they felt their advice affected the group decision. *E* 1, in the meantime, invited *E* 2 by phone to come and administer the attention-test.

Dependent measures. When this questionnaire was filled out, *E* 1 announced the end of his experiment, informed *E* 2 of the group decision and left. After a brief form had been filled out, asking for some personal data, *E* 2 addressed himself to the subject and said : "As you have already performed the test, I will give you a questionnaire for indicating your first impressions on it. Will you please also fill out this questionnaire now?" The questionnaire included several 7-point rating scales. The subject's evaluation of the test was tapped by 11 items which were designed to produce three index-scores. The major dependent measure consisted of the subject's responses to the scales varied-monotonous, enjoyable-dull, and boring-pleasant. Summing responses to these scales produced an "enjoyability-index" toward the test, with values ranging from 3 (most negative) through 12 (the midpoint) to 21 (most positive). Since additional justification for performing the dull test for a long time also might be found by increasing the importance of the test and/or by decreasing its tiresome nature, two additional index-scores were planned. The "importance-index" included the scales important-unimportant, useful-useless,

meaningful-meaningless, and interesting-uninteresting. The "hardness-index" included the scales tiresome-not tiresome, exacting-relaxing, light-hard, and difficult-easy. While the subject was indicating his first impression of the task, *E* 2 checked the group-decision to perform the test for 45 or 25 minutes, and invited the confederates to enter a cubicle. He explained the test procedure to each confederate, closed the doors of the cubicles, and prepared the apparatus for starting the test. After the subject had completed the questionnaire, *E* 2 said to him : "As you know, I need data for periods ranging from 5 to 50 minutes. The data of all these periods are equally useful and important to me, so you may choose whatever period you like. By the way, do not worry about distracting the others, since everyone can leave his cubicle by a backdoor. Thus there is no possibility of disturbing each other during the test performance. You are thus completely free to choose as you like. What period do you then prefer?" On the previously completed form, *E* 2 circled the period chosen by the subject and invited the subject to enter his cubicle in order to perform the test.

Post-experimental interview. After the subject had performed the test for a few minutes, he was conducted by *E* 2 to *E* 1 who took a final interview. No subject indicated having the least suspicion as to the purpose and the manipulations of the experiment. All questions of the subject were answered, after which he was sworn to secrecy.

Baseline condition. The subjects in the Baseline condition, who were tested individually, first performed the test for 20 minutes (as a preliminary training-session), and after a waiting interval of about 5 minutes, filled out the personal form and the first impression questionnaire. They then were asked to choose a testing-period whichever they liked. Baseline subjects neither performed the counterattitudinal act nor received a monetary reward.

RESULTS

The data from four subjects were not included in the final analysis (three in the Low Incentive-No Success, and one in the Low Incentive-Success condition). One subject had misunderstood the experimental instructions; another subject had performed the test for hardly 15 minutes instead of the usual 20 minutes; still another subject told *E* 2 that he had been forced to advise 45 minutes, and a fourth subject clearly was initially in favor of performing the test for 45 minutes and did not follow the standardized advice. The analysis reported below represents the responses of 50 subjects, with 10 subjects in each condition [3].

[3] Forced-compliance research almost inevitably confronts the problem of subject loss and the attending alternative interpretation in terms of self-selection. The present findings, however, cannot be attributed to a process of self-selection, since the results remain statistically significant when the data from all subjects are included in the analysis. This statement also holds for all other instances were data were deleted.

EFFECTIVENESS OF THE MANIPULATION

Subjects were asked to indicate on a 17-point scale how strongly or weakly the final group-decision had been affected by their advice. A 2×2 analysis of variance revealed that the consequence manipulation was effective, since Success subjects clearly perceived that their discrepant statements had more influence on the group-decision than did No Success subjects ($F = 313.12$, $df = 1/36$, $p < .001$). Within the Success or No Success conditions, no differences between High and Low Incentive subjects were found to approach significance.

EVALUATIVE CHANGES

Postbehavioral aversive consequences consisted of influencing other "subjects" to perform a dull test for a long period by asserting that the test was an enjoyable one. Thus the most viable way of dissonance reduction was for them to come to believe that the test was indeed

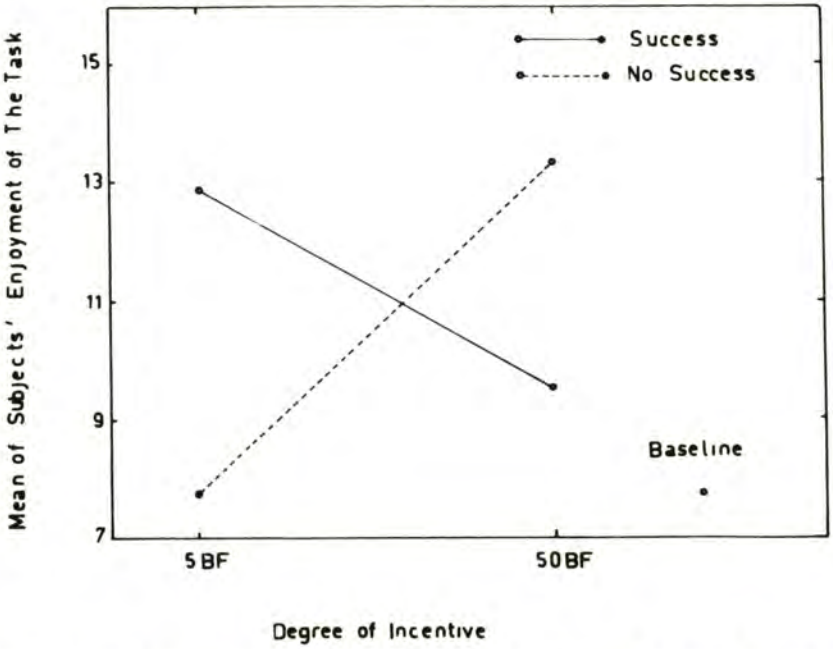

FIG. 1. MEAN SCORES ON THE ENJOYABILITY-INDEX. EXPERIMENT I. Higher numbers indicate greater enjoyment of the task; $N = 10$ for all conditions.

rather enjoyable. The enjoyability-index toward the test, therefore, is considered the major dependent measure of the experiment. The mean combined scores on the ratings enjoyable-dull, boring-pleasant, and varied-monotonous are presented in Figure 1. The results strongly

support the hypothesis. Only Success subjects rated the test more enjoyable as an inverse function of the amount of incentive offered for delivering the discrepant statements. No Success subjects actually manifest the opposite effect. The analysis of variance shows that the predicted interaction is significant ($F = 18.54$, $df = 1/45$, $p < .01$). Planned t tests further reveal that the dissonance-predicted inverse relationship is significant ($t = 2.44$, $p < .025$), and that Low Incentive-Success subjects rated the test more enjoyable than Baseline subjects ($t = 2.65$, $p < .01$) and than Low Incentive-No Success subjects ($t = 3.24$, $p < .01$)[4]. The unpredicted positive relationship between inducement magnitude and evaluative change also proves to be significant. Thus High Incentive-No Success subjects rated the test as more enjoyable than did Low Incentive-No Success subjects ($t = 3.69$, $p < .01$) and Baseline subjects ($t = 3.12$, $p < .01$). A similar pattern of results is found on both the importance- and hardness-indexes. The responses in the experimental conditions, however, did not differ significantly from each other or from the Baseline condition.

BEHAVIOR CHANGES

Subjects' post-experimental choices of a testing period provide a measure of the behavior effects of discrepant role playing. If discrepant role playing is effective in producing behavior changes, Success subjects should be found to choose a longer testing period as an inverse function of the amount of inducement for compliance. The mean time chosen by subjects to perform the test is represented in Figure 2. The pattern of results is quite similar to the attitudinal responses on the enjoyability-index, but Success subjects generally chose longer testing periods than No Success subjects. A 2×2 analysis of variance reveals that the interaction of the consequence variable with the level of inducement reaches only a borderline level of significance ($F = 3.89$, $df = 1/45$, $p < .10$). There is, however, a highly significant main effect of the consequence manipulation ($F = 8.74$, $df = 1/45$, $p < .01$). Both Low Incentive-Success subjects and High Incentive-Success subjects chose testing periods which were significantly longer than those chosen by Baseline subjects ($p < .02$).

DISCUSSION

The results support the notion that the consequences of counterattitudinal behavior are of crucial importance in predicting a role player's subsequent evaluative and behavior responses. In line with the aversive consequence hypothesis, subjects were found to bring their evaluative cognitions in line with overt behavior as an inverse function of amount of incentive only when they were successful in convincing other

[4] Planned t tests are one-tailed, while the comparisons reported for unpredicted effects are two-tailed tests.

"subjects" of the counterattitudinal position advocated. In contrast, when the discrepant statements did not seem to persuade the audience, subjects displayed more evaluative changes when a high incentive was offered.

The latter outcome is typically predicted by the earlier opponents of dissonance theory who emphasize the self-persuasive effects of the

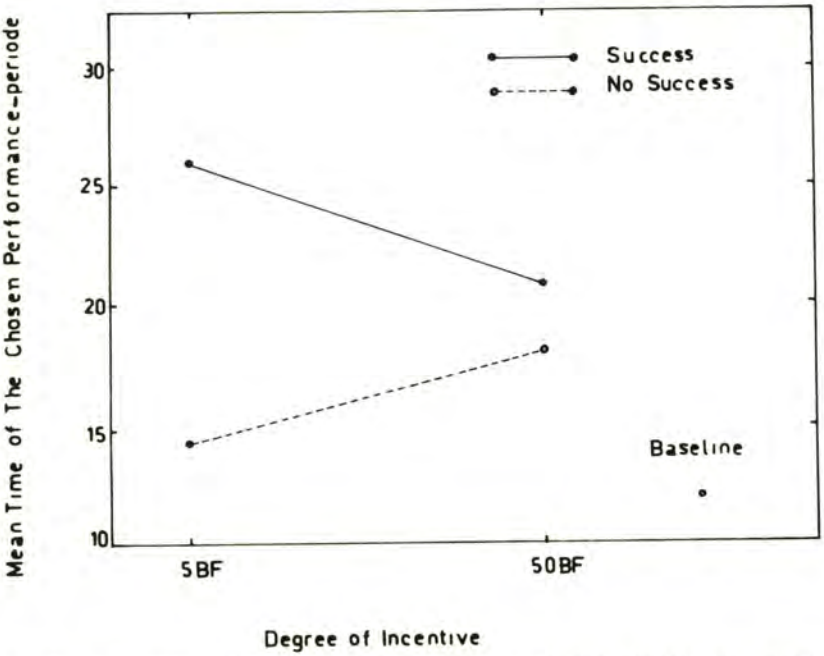

FIG. 2. MEAN TIME (IN MINUTES) CHOSEN BY SUBJECTS TO PERFORM THE DULL TASK. EXPERIMENT I. $N = 10$ for all conditions.

subject's cognitive contact with arguments which support the new attitude position adopted. The high incentive is then assumed to somehow foster such a process of self-persuasion (cf. Janis & Gilmore, 1965; Rosenberg, 1965). The mediating role of supporting arguments in producing evaluative change is rather irrelevant to the present results, however, since the discrepant role playing consisted more of a simple and descriptive assertion than of an elaborate persuasive advocacy. The more positive feelings towards the test of High Incentive-No Success subjects might be due to a generalized effect of the monetary reward (cf. Carlsmith, Collins and Helmreich, 1966; Nuttin, 1966).

The conclusions to be drawn from the first experiment must be seriously tempered, however. Subjects in the Success conditions not only caused their experimental partners to spend much time on a dull test, but also felt that they were highly successful in performing the discrepant role playing. Subjects in the No Success conditions, on the

other hand, not only differed from subjects in the Success conditions in that their behavior did not produce negative consequences, but also felt that they were highly unsuccessful in playing the role of expert. Consequently, it is impossible to make a strong case for any theoretical interpretation in terms of either the aversive consequence variable or the success variable.

Another interpretational problem of the present findings concerns the post-experimental behavior changes. The conclusion that successful counterattitudinal role playing is quite effective in changing one's subsequent behavior, however tempting it may be, may also be quite misleading. The main effect of the consequence manipulation may result from a difference between Success and No Success conditions in the perceived social desirability of the choice alternatives available. The group decision to perform the test for 45 or 25 minutes was communicated to *E* 2 just before he asked the subject to choose a testing period for himself. Taking this into account, Success subjects may have found it difficult to choose a short period, since this would have been in sharp contrast with the others' willingness to participate in the test for a considerably longer time. The behavior data were also vulnerable to experimenter biases. *E* 2, when verbally asking for the subject's preference, may have unwillingly communicated that he expected the subject to choose longer testing periods under Success conditions. Since *E* 2 was blind to the reward manipulation, such bias would be limited to an effect on the consequence variable alone.

With these problems in mind, a second experiment was designed. Its major purpose was to control for the potentially contaminating success variable and to provide a less biased test of the behavior effect of discrepant role playing. Some minor aspects of the experimental procedure were also changed in order to increase the arousal of dissonance in the aversive consequence conditions.

EXPERIMENT II

The design of the present experiment is a 2 × 2 factorial which constitutes a conceptual replication of the first experiment. To control for the relative importance of postbehavioral success versus post-behavioral aversive consequences, success was kept constant. Thus all subjects learned that their counterattitudinal statements were effective in persuading their colleagues. This successful discrepant role playing, however, did not always entail aversive consequences. Half of the subjects were informed, before engaging in the discrepant act, that their experimental partners would not have to perform the task, and thus, would not be led to incur any negative outcomes (No Aversive Consequence condition). The other half of subjects believed that their colleagues would actually perform the dull task for the time they had decided to do so (Aversive Consequence condition). As in the first experiment, subjects were predicted to display more evaluative change

as an inverse function of incentive magnitude only when the behavior led to aversive consequences. If postbehavioral success, however, is a key determinant of post-compliance evaluative change, the dissonance-predicted effect should be obtained whether or not the subjects perceived their successful role playing as making other persons suffer.

METHOD

SUBJECTS

Fifty-four male high-school students (from 14 to 16 years old) served as subjects.

PROCEDURE

The basic procedure of the second experiment was identical to the procedure used in the Success conditions of the first experiment. Thus only the operationalization of the independent variable and the differences with the first experiment will be described in this section.

Manipulation of the consequences. The Aversive Consequence conditions were a replication of the Success conditions of the first experiment. Thus after the subjects had discovered that their discrepant statements were successful in convincing the confederates, they also perceived that the confederates had indeed to perform the dull task for 45 minutes. Consequences were manipulated by having the subjects of the No Aversive Consequence conditions learn that their role playing, although equally effective in convincing the group of the discrepant position, did not produce the aversive consequence of forcing the confederates to spend 45 minutes on the dull task. More specifically, after the subject had performed the task for 20 minutes, *E* 2 said that he happened to have enough data for his research now if only the subject himself would be willing to return. *E* 2 then conducted the subject to *E* 1 and informed *E* 1 that, as he already had enough data, the other participants did not have to perform the task anymore. *E* 1, apparently surprised, agreed while saying that the other participants would be informed after the group-decision phase was over. *E* 1's subsequent request for the subject to perform the counterattitudinal act also included some statements which re-emphasized the absence of aversive consequences. After the subject's discrepant advice and the group decision were over, the confederates were told that *E* 2 just happened to have enough research data, and were dismissed, after which the subject alone returned to *E* 2 to fill out the post-experimental questionnaire and to choose a performance period for himself.

Baseline condition. As in the first experiment, a Baseline condition was run. In contrast to the experimental conditions, the dependent measures were assessed immediately after the task had been performed for the first time. Subjects thus indicated their attitudes toward the task

and then chose a performance period in the absence of any discrepant behavior or monetary incentive.

Procedural changes. The dull task was changed to be more monotonous and boring but less important. The sums were simplified into two digits between 0 and 10 and errors occurred only about once in five minutes, instead of about 15 per five minutes as in the first experiment. The task was not presented as a new attention-test being constructed, but as just a simple task under study by Mr — (*E* 2) of the General Experimental Psychology Section of the Institute. Behavioral consequences were made more aversive by having a confederate (always carrying his swimming-trunks and towel with him) reply to the subject's discrepant advice that he had planned to go to swim, but that he was willing to give up this plan in order to perform the task for a longer time, since the subject said the task to be pleasant and enjoyable.

A spatial separation was introduced between the group-decision experiment and the task experiment. In contrast to the first experiment, the subject left the experimental room to perform the initial task in a separate room on another floor of the building. Also, at the end of the group-discussion experiment, either the subject alone (No Aversive Consequence condition) or the subject and the confederates (Aversive Consequence condition) went to this other floor for performing the task. Under Aversive Consequence conditions, *E* 2 first instructed two of his assistants to each have a confederate perform the task for 45 minutes (in a separate room) and to have them fill out the questionnaire afterwards. The dependent measures were assessed by a third experimenter in order to avoid as much as possible social desirability or other biasing factors that could affect the post-experimental behavior measures. After the subject re-entered the room where he had previously performed the task, *E* 2 apologized for urgently having to leave and said that some other person (*E* 3) would soon arrive to take over. *E* 3 after a while entered and took the dependent measures. The subject safely could be assumed to be fully aware of the fact that *E* 3 was not directly involved in the task research and was not informed of the confederates' decision to perform the task for 45 minutes. The subject thus could feel much more free to choose whatever performance period he wished. Also the subject's decision was not to be contaminated by the prospect that the confederates could become aware of the fact that his behavior might be inconsistent with his advice to them. Finally, since *E* 3 was blind as to the experimental condition to which the subject was assigned, there was virtually no possibility for experimenter bias to operate.

The subjects' post-experimental evaluation of the task was measured by means of 15-point scales rather than 7-point scales. The same three items were used for the crucial enjoyability-index, but the importance-index and the hardness-index were reduced to include two items, namely, important-unimportant and meaningful-meaningless for the importance-index, and tiresome-not tiresome and exacting-relaxing for

the hardness-index. As to the behavior measure, there was a choice of performing the task from 5 minutes to 60 minutes, rather than from 5 minutes to 50 minutes.

The group's initial decision on performing the task was settled at 15 à 20 minutes (instead of 20 à 25 minutes), while the subject was urged to advice them to perform the task for 50 minutes (instead of 45 minutes). As in the Success conditions of the first experiment, the group's final decision always was to perform the task for 45 minutes. It might also be noted that only two instead of three confederates could participate in each session.

RESULTS

Four subjects were eliminated from the analysis. Three subjects (two in the Low Incentive-Aversive Consequence condition and one in the Low Incentive-No Aversive Consequence condition) refused to accept the money. The data from an additional subject (in the Low Incentive-Aversive Consequence condition) were disregarded because of the confederates acting out of character.

As in the first experiment, subjects were asked how much they thought their advice determined the group's final decision. As expected, all subjects indicated that their discrepant role playing was highly effective in convincing the confederates. No differences were found to approach significance among the four experimental conditions.

EVALUATIVE CHANGES

Subjects' responses on the enjoyability-index are represented in Figure 3. As predicted, under conditions of aversive consequences Low Incentive subjects came to believe their professed statements far more than did High Incentive subjects. When the successful discrepant act did not produce an aversive event, the dissonance-predicted effect was not obtained. The analysis of variance shows that the predicted interaction of the consequence and incentive variable is significant ($F = 4.67$, $df = 1/45$, $p < .05$). The specific predictions, again, are clearly confirmed. Thus Low Incentive-Aversive Consequence subjects evaluated the task as being more enjoyable than did the Baseline subjects ($t = 3.69$, $p < .005$), the High Incentive-Aversive Consequence subjects ($t = 2.45$, $p < .025$), or the Low Incentive-No Aversive Consequence subjects ($t = 1.96$, $p < .05$). The Low Incentive-Aversive Consequence condition furthermore, was the only condition to differ significantly from the Baseline group. The responses on the importance-index show a similar pattern as the results of the enjoyability-index. However, as was the case in the first experiment, the data of the importance-index and of the hardness-index did not reveal any significant differences.

The results thus strongly confirm the prediction derived from dissonance theory and indicate that postbehavioral success does not,

by itself, affect the subjects' subsequent evaluative cognitions. The positive relationship between amount of incentive and subsequent cognitive change in the absence of aversive consequences might somehow relate to the subjects' feelings of failure, since this effect was not replicated when a successful discrepant role play was performed.

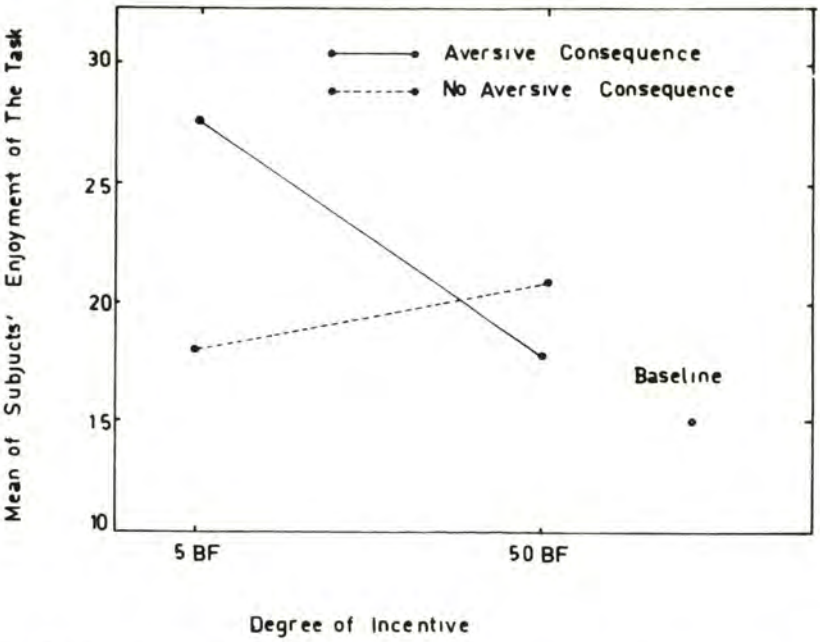

FIG. 3. MEAN SCORES ON THE ENJOYABILITY-INDEX AFTER SUCCESSFUL ROLE PLAYING. EXPERIMENT II. Higher numbers indicate greater enjoyment of the task; $N = 10$ for all conditions.

Subjects, in fact, may well be bothered about having failed to successfully perform the role of expert, especially when having been paid an ample amount of money for performing the job. They may tend, then, to attribute the cause of their failure to the recipients of their advice and to convince themselves that the audience was wrong in rejecting their statements, since the task, after all, was not that boring and monotonous. In any case, the necessary conditions for a positive relationship to be obtained and the underlying mechanisms of such an effect are not yet clearly understood. The fact that Cooper and Worchel (1970) did not report a positive relationship under conditions where the subjects did not succeed in convincing the confederate, while Calder et al. (1973) reported a non-significant positive relationship, also suggests that the effects of unsuccessful role playing are not clearly established.

In contrast to the first experiment, no reliable differences in behavior were found among the four experimental conditions and the Baseline condition. Thus the Low Incentive-Aversive Consequence treatment, although quite effective in changing the subjects' evaluative responses, did not affect the subjects' subsequent behavior. It may thus be concluded that simple discrepant role playing is, by itself, not effective in producing behavioral changes. These findings once again underscore the need to give maximum care in experimentation to control for potentially contaminating or biasing factors.

DISCUSSION

The data from the present studies are consistent with the proposition that counterattitudinal role playing does not lead to the arousal of cognitive dissonance unless that role playing results in negative consequences. As predicted, subjects evidenced evaluative changes as an inverse function of amount of justification only when their discrepant statements led to the aversive event of having some unsuspecting colleagues spend much time on a dull task. Thus postbehavioral aversive consequences rather than postbehavioral success is shown to be a necessary condition for the dissonance-predicted effect to be obtained.

Once again, the data indicate that social psychologists erroneously continue to conceive of post-compliance cognitive changes as "attitude change", which would imply that attitude-discrepant role playing modifies an underlying attitude in its cognitive, affective and conative dimensions. Low Incentive-Aversive Consequence subjects rated the task as more enjoyable after giving the discrepant speech. They did not, however, significantly enhance the importance of the task and/or decrease its tiresome nature. Thus only the particular evaluative cognitions which are directly relevant to the specific content of discrepant role playing and/or to the specific nature of the aversive consequences produced prove to be affected by discrepant role playing. Also, Low Incentive-Aversive Consequence subjects did not engage in the dull task for a longer period than Baseline subjects. The behavior measure consisted of a commitment to perform the task for a given time rather than of an observation of the actual time spent on the dull task. Nevertheless, the subjects' choice of a performance period is considered a measure of attitude-related, overt behavior rather than a measure of the conative component of their attitudes, since it was clearly implied in the situation that the subjects would have to perform the task for the time they chose and since the subjects actually started performing the task supposedly for the time they had decided upon. Whatever the conceptual status of the behavior data, the findings clearly challenge the assertion by Collins and Hoyt (1972) that : "these forced

compliance procedures produce enduring, transsituational changes in both *attitudes and behavior*, – perhaps more so than any other technique of persuasion [p. 584, emphasis added]".

It should be emphasized that the present experiments do not provide compelling evidence that a motivational process of dissonance arousal and reduction must be invoked to explain the inverse incentive-attitude change relationship. Self-perception theory (Bem, 1965, 1972) as well as response contagion theory (Nuttin, 1975) are both able to adequately account for the dissonance-predicted effect.

According to Bem's (1965, 1972) self-perception analysis of dissonance phenomena, a subject's post-compliance attitude statements are based upon his observation of his own overt behavior and the external stimulus conditions under which it occurs. Subjects would infer their beliefs from their prior behavior to the extent that the situational cues imply low external reinforcement contingencies (e.g., low monetary reward). Self-perception theory thus proposes an alternative interpretation of the dissonance-predicted effect without hypothesizing a mediating process of dissonance reduction. Bem's self-perception point of view also has been integrated by Kelley (1967) into the general information-processing model of attribution theory.

As noted by Collins and Hoyt (1972), a self-perception approach which emphasizes the role of behavioral consequences in drawing inferences from that behavior can readily account for recent pro-dissonance findings. The attribution metaphor would then suggest that an individual will attribute his "counterattitudinal" act to his underlying attitude (i.e. changes his opinions to be more consistent with overt behavior) whenever the environmental stimuli suggest high choice and high behavioral consequences. Cast in the vocabulary of Bem's self-perception theory, an individual would be said to infer his opinions from the self-observed behavior when the specific reinforcement contingencies for endorsing the position advocated are weak and when the consequences of the opinion statements (e.g., persuasion of the audience) have been associated in the individual's past training history with strong reinforcement for telling the truth (and/or punishment for being deceitful).

Some recent experiments have been conducted to distinguish between dissonance and self-perception theory by manipulating the salience of initial attitudes (Snyder and Ebbesen, 1972; Ross and Schulman, 1973). Self-perception theory postulates that an individual relies on his overt behavior to infer his attitude only when internal cues are weak or ambiguous. Thus the more salient the subject's initial attitude, the less his attitude should be inferred from his prior behavior, and the less attitude change should be manifested. Dissonance theory, on the other hand, would predict that pressures toward dissonance reduction through attitude change would increase with increasing salience of cognitive dissonance, and that one method of increasing a subject's awareness of dissonance would be to increase the salience of his initial attitude. It has therefore been argued that a manipulation of the salience

of initial attitudes provide a crucial test between self-perception theory and dissonance theory.

It is rather unclear, however, whether a differential prediction should, in fact, be derived from the competing theories. Increasing the salience of premanipulation attitudes should, if anything, increase the resistance to change of the initial attitude cognitions. Under such circumstances, subjects should be predicted by dissonance theory to change some other relevant cognitions in order to achieve consonance. The experimental procedures, furthermore, did not force important aversive consequences to follow from discrepant advocacy. It also might be noted that the experimental manipulations required the subject to first make up his mind on a given attitude issue, then, to write an essay at variance with his attitude position, and immediately afterwards, to indicate his attitude on the same issue (Snyder and Ebbesen, 1972), or to first write an attitude-discrepant essay, then, to confront his initial attitude position (on a questionnaire he had completed a week before), and immediately afterwards, to indicate his present attitude (Ross and Schulman, 1973). These manipulations all occur in a single experimental context and within a quite restricted period of time. Subjects probably respond to such an experimental situation more as a puzzled problem-solver than as an individual coping with the aversive tension state created by dissonance. Not surprisingly, then, the results of the "crucial" experiments did not offer consistent support for either dissonance theory or self-perception theory.

Green (1974) more recently claimed to have demonstrated that self-perception theory cannot account for the forced-compliance phenomenon. Green argued that self-perception theory holds that the extremity of initial attitudes would have little or no effect on the subjects final attitudes, since initial attitudes are irrelevant to the process of inferring attitudes from overt behavior. Dissonance theory, on the other hand, would predict more dissonance arousal and more attitude change with increasing discrepancy between initial attitudes and overt behavior, and thus with increasing extremity of initial attitudes. Green manipulated the extremity of initial attitudes and the monetary incentive for compliance, and found that subjects displayed significant attitude change as an inverse function of incentive only when initial attitudes were extreme.

These findings, however, in no way disconfirm self-perception theory. The assumption of self-perception theory that premanipulation attitudes are no longer salient for the subjects at the time of the posttest and that subjects, phenomenologically, are unaware of any attitude "change" does not necessarily imply that initial attitudes do not partially determine final attitudes. But even when Green's interpretation of the role of initial attitudes in self-perception theory is assumed to be correct, the results from his experiment conform with self-perception theory. First, since self-perception theory would predict the subjects' final attitudes to be similar under both conditions of low incentives, it would also predict more attitude "change" to be obtained under conditions of

extreme initial attitudes. In fact, the difference between initial attitudes and final attitudes must necessarily increase when initial attitudes are more extreme and thus more discrepant from the attitude-position to be inferred from overt behavior. In addition, the final attitudes reported under conditions of moderate initial attitudes are quite similar to the attitude responses from subjects in the control condition. The attitude to be inferred from overt behavior apparently thus was not meaningfully different from the subjects' initial attitudes. If overt behavior would have been significantly discrepant from the moderate initial attitudes, dissonance theory in this condition also would have a significant reverse-incentive effect to be produced. In the extreme attitude condition, however, it is unlikely that overt behavior coincides with the subjects' extreme premanipulation attitudes. This condition thus represents a typical situation in which both dissonance theory and self-perception theory predict the inverse incentive-attitude "change" relationship to be obtained. There is thus no reason whatsoever to refute self-perception theory on the basis of the experimental findings by Green.

More direct attempts to validate a dissonance interpretation have focused on the role of arousal in mediating post-compliance attitude change (Waterman and Katkin, 1967; Zanna and Cooper, 1974). The results reported by Zanna and Cooper do in fact suggest that subjects perceive themselves to be aroused by the dissonance manipulations and that the subjects' interpretation of the source of arousal determines whether or not attitude change will be produced. Only by assumption, however, does the self-observed arousal arise from the presence of inconsistent cognitions. Moreover, the arousal variable can easily be integrated into a self-perception model, if one only assumes that the forced-compliance produced arousal is conceptually identical to the physiological arousal produced by any perturbing or emotion-provoking situation. There is indeed an accumulating body of research which suggests that a person's self-attributions of emotions, attitudes and beliefs are based : a. on his perception of arousal and its apparent source (e.g., Nisbett and Schachter, 1966; Valins, 1966; Ross, Rodin and Zimbardo, 1969; b. on his self-observed behavior (e.g., Davison and Valins, 1969; Kopel and Arkowitz, 1974); and c. on his perception of external situational cues (e.g., Schachter and Singer, 1962).

It has previously been argued that self-perception theory would predict an individual to infer his attitude to be in line with overt behavior whenever the behavioral circumstances imply both high choice and important behavioral consequences. It now can be added that an actor's perception of the importance of post-behavioral consequences depend upon his awareness of his own increased arousal and upon his attributing this self-observed arousal to the consequences of his behavior. Just as one would not infer a movie to be very funny or dramatic, if not perceiving oneself to be excited and aroused by watching the movie, so would an actor not infer the consequences of his behavior to be important (whether aversive or attractive), if not

perceiving himself to become aroused when producing these consequences. Accordingly, there is no need to postulate a motivational process of dissonance reduction to account for the findings.

Nuttin (1975), who approaches attitude change with a "mere verbal response" paradigm, proposed an alternative interpretation of the forced-compliance phenomenon which emphasizes the non-cognitive effects of arousal on overt responses. An extensive research program conducted by Nuttin suggests that pro-dissonance findings result from an "a-cognitive" process of "evaluative response contagion" rather than from a tendency to restore cognitive consistency. Response contagion theory basically holds that an increase in arousal enhances the relative dominance and impact of the most recent ongoing responses (emitted during the counterattitudinal advocacy) upon the immediately subsequent attitude responses (emitted during the post-experimental attitude measurement), resulting in a greater similarity between the prevailing characteristics of the former and the latter responses.

Since postbehavioral aversive consequences likely produce increased levels of arousal, and thus increased response contagion, pro-dissonance findings can be explained as easily by Nuttin's evaluative response contagion hypothesis as by recent dissonance theorizing or self-perception theory. It should be noted, however, that a process of response contagion is most likely to operate when the post-experimental attitude responses are tapped immediately after the discrepant verbal statements have been emitted, and when the discrepant speech involves an elaborate advocacy which would increase the dominance of the previously ongoing responses. Since the present studies employed a quite simple discrepant speech, the hypothesis of response contagion may be less appropriate for explaining the present findings.

It is concluded from the present studies that successful discrepant role playing does not in and of itself effect opinion change but that the production of aversive consequences is necessary for the dissonance-predicted cognitive changes to be obtained. The results also indicate that simple discrepant role playing is not, by itself, effective in producing behavior changes. Further research is needed, however, to clarify the relative merits of dissonance theory, self-perception theory, and response contagion theory in explaining the attitudinal effects of consequence-producing, simple discrepant role playing.

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