

## DIRECT AND IMPLIED SOCIAL RESTORATION OF FREEDOM<sup>1</sup>

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The hypotheses tested were: (a) A threat to the freedom to have one of two choice alternatives arouses reactance and a consequent increase in desirability of that alternative; (b) the increase in desirability due to reactance will be reduced to the extent that the threatened freedom is directly restored by another person; and (c) the increase in desirability due to reactance will be reduced to the extent that another person, under the same threat to freedom, is observed to act so as to restore his own freedom. In the first experiment the subject and two confederates acting as subjects were to make a group decision between two alternatives. When one of the confederates demanded the selection of a particular alternative, subjects tended to want the other alternative, confirming the first hypothesis. However, when the first confederate's demand was followed by the second saying that he had not yet made up his mind, thus restoring the freedom for a group decision, subjects tended to prefer the alternative demanded by the first confederate, confirming the second hypothesis. The second experiment differed from the first in that each group member was to make his own choice between the two alternatives, rather than there being a group decision. Under this condition it was found that when one confederate demanded that all in the group choose a particular alternative, subjects tended to choose the opposite alternative, again confirming the first hypothesis. But when that confederate's demand was followed by the second confederate saying that he had not yet made up his mind (about his own choice), the subjects responded as if their own freedom had also been restored; that is, these subjects tended to prefer the task demanded by the first confederate, supporting the third hypothesis.

Previous research has shown that the desirability of a choice alternative increases when a person is subjected to attempts to influence his choice away from that alternative (Brehm & Sensenig, 1966). According to reactance theory (Brehm, 1966), if a person can choose either of two alternatives and then finds that his freedom to have one of them is threatened, he will experience "psychologi-

cal reactance," a motivational state directed toward restoration of freedom. Where, for example, a person can select either Alternative A or Alternative B and his freedom to take Alternative A is threatened, reactance will be aroused in him, and he will consequently feel an increase in his desire to have Alternative A. Theoretically, however, what the person wants is not so much to have the alternative as it is to restore his freedom to have it, and if his freedom were somehow restored, he would no longer be in a state of reactance and would no longer have an "extra" desire for Alternative A. Reactance aroused by a threat to freedom will be reduced by the restoration of freedom, no matter how that restoration comes about. While the evidence has supported the prediction that threatened or eliminated choice alternatives would become more desirable, there has been no evidence gathered on the further implication that if the individual's freedom were restored, the desirability of the alternative

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would return to or remain at its prethreat level.

The present paper is concerned with two different ways in which freedom may be restored—direct intervention by a third person and social implication. The first experiment to be reported was designed to examine the effects on reactance of direct intervention, the second was designed to see if reactance could be reduced by socially implied restoration.

What is necessary for direct social restoration of freedom is that another person, who may or may not be under the same threat to freedom, act in such a way as to remove the threat. For example, a mayor who removes a "no dumping" sign from a vacant lot may restore a person's freedom to leave trash there. Or, a secretary may be assured by her boss that she may smoke even though a "no smoking" sign has just been posted in her office. As these examples also imply, successful restoration of freedom assumes that the person who intervenes has some power over the behavioral freedom in question.

To establish a freedom that could be threatened by one person and restored by another, the first experiment utilized a group decision. The subject, as one member of the three-person group, was under the impression that he could influence the group choice between two tasks. Hence, if one member attempted to usurp the group decision by choosing one of the two tasks, the subject should have felt that his freedom to influence the group to choose the other task was threatened. However, if in addition to the attempted usurpation, the third person in the group openly resisted the attempted usurpation of choice, the subject's freedom to influence the group decision should have been at least partially restored. The more power in decision making that the resisting person had relative to the one who attempted to usurp the decision, the clearer it would be to the subject that his freedom to influence the decision was restored. Thus, the first experiment was designed to test the following hypotheses: (a) A threat to the freedom to influence the group decision in favor of one of two alternatives will arouse reactance and a consequent increase in desirability of the threatened alter-

native. (b) Given that there has been a threat to freedom to choose one alternative, the more that freedom is directly restored, the less will be the increase in desirability of that alternative. (c) The greater the power of the person who restores freedom relative to the power of the threatener, the greater will be the restoration of freedom and, consequently, the less will be the increase in desirability of the threatened alternative.

## EXPERIMENT I

### *Method*

#### *Subjects*

The subjects were recruited from introductory psychology courses at Duke University to participate in an experiment titled "Group Decision Making and Task Cooperation." Participation helped to satisfy a course requirement. In all, 94 males participated, and the data for 4 of these subjects were deleted. Three subjects were acquainted with one of the confederates, and 1 subject expressed suspicion about the experiment during the debriefing session.

#### *Procedure*

Upon arrival, the subject was asked to wait in an experimental anteroom, where he was soon joined by the two confederates playing the roles of two other subjects. The three were shortly asked by the experimenter to enter the experimental room and to occupy three numbered seats. The experimenter then explained that he was interested in studying how groups of people who have different amounts of power arrive at group decisions and how they work together subsequent to those decisions. After citing illustrative examples such as political conventions and stockholders' meetings, the experimenter described the group task. He said that the task was actually a test of leadership ability and group sensitivity and that the test considered, first, of deciding which of two human relations case studies the group would try to solve, and second, of trying to work out a solution for the case chosen.

At this point each subject was given the two case histories along with sufficient time to read them. The case histories were adaptations of "The Case of the New Truck" (Maier, 1955, p. 117) and "The Case of Walt Henderson" (Maier, 1955, p. 591). The cases were approximately 400 words long, and subjects were given 10 minutes in which to read them. These two cases were selected on the basis of pre-testing results which showed that the prospect of working on them was about equally attractive.

After the subjects had finished reading the case histories, the experimenter said:

I think the best course to follow would be to give you a few minutes to discuss these problems among yourselves. Since you do not yet know how much power you will have to decide which case the

group will work on, it would be a disadvantage to you to state which case you prefer. Your task during this period should be to try and pinpoint the major problems which need to be solved in each case. In doing this, everyone will get a good indication of what is involved in both histories, and everyone will have equal knowledge of the problems when you get ready to decide on which case you want to work. Remember, do not state your preferences now. Merely define the problems involved.

The experimenter allowed 7 minutes for this discussion. The confederates had been briefed on what points to mention, and their behavior was held as uniform as possible with all subjects. Also, since the confederates at this point were aware only of the vote distribution in the group and did not know which condition was being run or which case would be threatened, their behavior could not be aimed at influencing the results in any systematic way. The discussion was employed to get the subjects involved in the group and to give them a chance to get acquainted with the confederates.

### *Manipulations*

*Power.* The power variable was designed to be relevant to the task, but not to imply any difference in expertise or ability to work on the task. The experimenter explained that the subjects would draw slips of paper from a box, and the number on the slip would indicate how many votes they would have. They were instructed to write the number of votes they had on a card and display it before them so everyone could see it. It was further pointed out that it would take a two-thirds majority of the votes to pick a task for the group, and that subjects had to use all their votes as a block for one task or the other. Last, the experimenter told the subjects that he might interrupt the group while they were deciding on which task to work in order to give them a questionnaire which would aid him in seeing how the group was functioning during the decision phase of the experiment.

Questions were answered by the experimenter, and then he had the subjects draw slips from a box. Actually, all of the slips were numbered with a 5. One confederate (the threatener) and the naive subject always received 5 votes. The number of votes the other confederate (the restorer) was to have had been written on a blackboard behind the group, concealed by a number of figures. The restorer was given either 2 votes (low power), 5 votes (equal power), or 8 votes (high power). In other words, when he had 2 votes, he had almost no power in deciding on a task, since the others had 5 each, and 8 was the required majority for a decision. When he had 5 votes, he was an equal member, since everyone had 5 votes. When he received 8 votes, he was the controlling member, since it would take 12 votes for the group decision.

*No-threat condition.* Immediately after the subjects had written their votes on the cards and before

there was any discussion, the experimenter stated: "I think now would be a good time to have you fill out the questionnaire. In this way, I will not interrupt your discussion period. Please fill out these questions carefully." The questionnaires were then passed out and completed. After this, the subject was debriefed, and any suspicions the subject may have had were examined.

*Threat condition.* The confederates were cued as to which condition was to be run by the box the experimenter used to pass out votes. The two boxes had been designated as threat-condition indicators, with one being to threaten Alternative A and the other being to threaten Alternative B. After the votes had been passed out, the experimenter said: "All right, now you may begin your discussion." Immediately after this, one confederate snapped: "Well, I think it's obvious that we'll work on Task A (or B). There's really no question about it!" The experimenter looked somewhat surprised and said: "Some groups seem to have a rough time getting started, so maybe now would be a good time to ask you to fill in your questionnaires. Please fill these out now, and then you can start again." The questionnaires were then passed out. After the subjects had filled them out, they were debriefed and questioned to uncover any suspicions they may have had about the experiment.

*Restoration conditions.* Here again, the confederates were cued as to the condition and the alternative to be threatened by the ballot box. After the votes had been passed out, the experimenter gave the instructions to begin the discussion. The first confederate began in the same style as in the threat condition, but this time the second confederate countered by saying: "Wait just a minute, I really haven't made up my mind about the two tasks yet." The experimenter then interrupted the group in the same way as in the threat condition, passed out the questionnaire, and carried out the debriefing, probing for suspicion.

### *Confederates*

There were two teams of confederates, and the individuals on each team always played the same role. Thus, it was always the same person on each team who carried out the threat, and for the sake of convenience, he will be referred to as the threatener, even in the no-threat condition; similarly, it was always the other person on each team who attempted to restore freedom, and he will be referred to as the restorer, even in the conditions of no threat and threat.

### *Design*

The design may be viewed as a 2 (Team 1 and 2)  $\times$  3 (restorer power of 2, 5, or 8 votes)  $\times$  3 (no threat, threat, restoration of freedom) factorial. Within each team, each threat and restoration condition was assigned 12 subjects, and each no-threat condition, 6. The two confederate teams worked throughout the period of data collection as their available time permitted. Within the constraints of

this design, subjects were randomly assigned to conditions.

### Results

A test of the hypotheses requires that subjects have little preference between the two tasks in the absence of social influence, that in the threat and restoration conditions, subjects perceive the threatener to have a strong position in favor of one of the tasks and the restorer to have a relatively neutral position. Task preference in the absence of social influence can be assessed by inspecting the responses of subjects in the no-threat conditions to the major dependent variable, the statement of preference for Tasks A and B.<sup>3</sup> Subjects indicated their preference by marking a 31-point scale with end labels, "Very definitely Task A" (scored 1) and "Very definitely Task B" (scored 31). Subjects exposed to both teams of confederates indicated a slight preference for Task B, the means being 17.22 and 17.33 for Teams 1 and 2, respectively, but, as intended, these data indicate that in the absence of social influence, the subjects had little preference between the two tasks (neutral point = 16). Since there was no clear preference expressed for one task over the other, and since threats to the freedom to choose either task should be psychologically equivalent, data on the subjects' preference for the tasks in the experimental conditions will be presented without regard to which task was threatened.

To assess perceptions of the positions of the two confederates, the subjects were asked to indicate the confederates' preference of the tasks on a 31-point scale (1 = very definitely Task A, 31 = very definitely Task B). The results, presented in Table 1, show that in the absence of social influence attempts (no threat), both the threatener and the restorer were seen as having no strong preference for either task. However, in the threat and restoration conditions, the threatener was seen as having a strong preference for the task he supported, while the restorer was perceived, much like the no-threat condition, as having no strong preference for either of the tasks (for Condition  $\times$  Threatener-Restorer interaction,  $F = 43.93$ ,  $df = 2/84$ ,  $p < .001$ ).

<sup>3</sup> Case A was "The Case of the New Truck," and Case B, "The Case of Walt Henderson."

TABLE 1  
PERCEIVED TASK PREFERENCE OF THREATENER  
AND RESTORER

Condition	Role played by confederate	
	Threatener	Restorer
No threat ( $n = 18$ )	17.22	16.00
Threat ( $n = 36$ )	3.88 <sup>a</sup>	15.50 <sup>a</sup>
Restoration ( $n = 36$ )	3.20 <sup>a</sup>	17.08 <sup>a</sup>

<sup>a</sup> Confederates' preference of the task was assessed using a 31-point scale. Scores in the threat and restoration conditions were coded, so that a mean below 16.00 indicates preference for the task demanded by the threatener, and a mean over 16.00 indicates preference for the task opposite to that demanded by the threatener.

Thus, the independent manipulation of the threatener's preference was appropriately perceived by the subjects, and the requirements for testing the hypotheses were met.

### Subject's Task Preference

The subjects were asked to indicate on which task they preferred to work. This question constituted the main dependent measure, and the results obtained from it are presented in Tables 2 and 3 along with an analysis of the data (see Table 3).

*The effect of the restorer's power.* Contrary to predictions, there were no significant effects for the restorer's power. If anything, the most powerful restorer (eight votes) was slightly less effective in restoring freedom than the less powerful restorer, since the subjects in the restoration condition were somewhat less likely to prefer the task demanded by the threatener when the restorer had eight votes than when he had five or two votes. Because the power of the restorer failed to have any significant effect on the major dependent variable, this variable was dropped from further analyses (see Table 3).

TABLE 2  
SUBJECTS' TASK PREFERENCE: EXPERIMENT I

Condition	<i>M</i>
No threat ( $n = 18$ )	17.28
Threat ( $n = 36$ )	22.30 <sup>a</sup>
Restoration ( $n = 36$ )	11.97 <sup>a</sup>

<sup>a</sup> Using a 31-point scale, scores in threat and restoration conditions were coded so that a mean below 16.00 signifies preference for the task demanded by the threatener, and a mean score above 16.00 indicates preference for the task opposite to that demanded by the threatener.

TABLE 3  
ANALYSIS OF VARIANCE FOR SUBJECTS'  
TASK PREFERENCE

Source	df	MS	F
Teams (A)	1	44.55	< 1
Votes (B)	2	132.35	2.42
Condition (C)	2	773.33	14.17*
A × B	2	29.81	< 1
A × C	2	13.66	< 1
B × C	4	121.26	2.22
A × B × C	4	5.52	< 1
Within error	72	54.58	

\*  $p < .001$ .

*The effect of the threat to freedom.* There was a highly significant effect ( $F = 14.17$ ,  $df = 2/72$ ,  $p < .001$ ) for the conditions of threat and restoration. The results on this variable were directly in line with predictions, since there was a significant tendency for the subjects to prefer the task opposite to that demanded by the threatener (Team 1, no threat versus threat alone,  $F = 8.91$ ,  $df = 1/72$ ,  $p < .01$ ; Team 2, no threat versus threat alone,  $F = 4.18$ ,  $df = 1/72$ ,  $p < .05$ ). Thus, a threat to the freedom to choose one specific task motivated the subjects to prefer that task, and this effect was replicated by both teams of confederates.

*The effect of restoring freedom.* According to the second hypothesis, when a person's freedom has been restored, there will be less reactance and consequent desire to have the threatened alternative. This hypothesis was strongly supported, since the subjects' preferences in the restoration conditions were not significantly different from the subjects' prefer-

ences in the no-threat conditions, and subjects in the restoration condition even showed a slight tendency to prefer the task demanded by the threatener. This preference for the demanded task in the restoration condition was reflected by the highly significant differences (Team 1,  $F = 20.25$ ,  $df = 1/72$ ,  $p < .001$ ; Team 2,  $F = 14.97$ ,  $df = 1/72$ ,  $p < .001$ ) between the subjects' task preferences in the threat and restoration conditions.

A frequency analysis of the direction of preference expressed by the subjects supported the main findings of the means analysis. Neither the task threatened nor the team made any difference, and overall, 78% of the threat subjects preferred the opposite task that the threatener proposed ( $\chi^2 = 12.97$ ,  $df = 1$ ,  $p < .001$ ), while 69% of the restoration subjects preferred the same task that the threatener proposed ( $\chi^2 = 4.69$ ,  $df = 1$ ,  $p < .05$ ). Not only was there a reliable decrease in the reactance effect in the restoration as compared to the threat condition, but, in addition, subjects in the restoration condition showed a reliable tendency to prefer the task proposed by the threatener.

*Perceived characteristics of the threatener and restorer.* On the postexperimental questionnaire, the subjects were asked several questions concerning their impressions of the other two ostensible members of the group. Table 4 summarizes these data. The data from Teams 1 and 2 have been combined in the table, since there were no important team effects.

TABLE 4  
PERCEIVED CHARACTERISTICS OF THREATENER AND RESTORER

Characteristic	No threat		Threat		Restoration	
	Threatener	Restorer	Threatener	Restorer	Threatener	Restorer
Capability <sup>a</sup>	10.34	14.56	12.72	12.44	13.22	10.39
Like to work with <sup>b</sup>	11.06	15.66	14.97	13.64	14.92	10.28
Leadership ability <sup>c</sup>	12.28	14.94	14.34	12.80	14.34	11.08
How well liked <sup>d</sup>	12.00	15.83	15.11	13.36	16.04	11.20
How much enjoys group <sup>e</sup>	17.22	15.16	15.34	14.38	16.39	13.22

Note.—In the no-threat conditions,  $n = 9$  for each team, and for the threat and restoration conditions,  $n = 18$  for each team.

<sup>a</sup> 1 = "Very capable," 31 = "Not at all capable."

<sup>b</sup> 1 = "Very strongly like to work with him," 31 = "Very strongly dislike to work with him."

<sup>c</sup> 1 = "A very good leader," 31 = "A very poor leader."

<sup>d</sup> 1 = "Very much," 31 = "Not at all."

<sup>e</sup> 1 = "Very much," 31 = "Not at all."

The first question asked the subjects to indicate how much they would like (1) or dislike (31) working on the experimental tasks with each of the other two. Responses indicated that for both teams of confederates, there was a tendency in the no-threat conditions to prefer the threatener to the restorer. However, in the threat conditions there was a slight, nonreliable tendency to want to work with the restorer more, and this tendency was larger and reliable in the restoration condition. The interaction between experimental conditions and confederate role was highly significant ( $F = 24.13$ ,  $df = 2/84$ ,  $p < .001$ ). The interaction was made up of about equal parts of decrease in desire to work with the threatener and increase in desire to work with the restorer, so there is no indication that these changes were due to either confederate alone.

Subjects were also asked to indicate on 31-point scales how capable they felt the threatener and the restorer to be in solving the problems, how good a leader they would make, and how likable they were. Responses to these three questions were similar, since the subjects tended to be somewhat more favorable toward the threatener in the no-threat conditions, but rated him more negatively in the threat and restoration conditions, while the restorer was rated about equal on these variables in the no-threat and threat conditions, but was rated somewhat more favorably in the restoration condition. This pattern was reflected in the highly significant Condition  $\times$  Confederate Role interaction found on all three questions (capable,  $F = 17.43$ ,  $df = 2/84$ ,  $p < .001$ ; leadership,  $F = 8.06$ ,  $df = 2/84$ ,  $p < .001$ ; like,  $F = 27.78$ ,  $df = 2/84$ ,  $p < .001$ ). Trends were found, indicating that subjects were generally more favorably disposed to Team 2 of the confederates than to Team 1. There were also significant Team  $\times$  Confederate Role interactions, indicating that subjects working with Team 1 of the confederates rated the threatener lower than the restorer overall, while subjects working with Team 2 of the confederates rated the threatener and restorer overall about equally. However, both of these findings are trivial, since they are generally attributable to more favor-

able ratings of the threatener in Team 1 than Team 2 in the no-threat condition.

Subjects were also asked to rate how much they believed that the confederates were enjoying the group. There were effects indicating that the confederates in Team 2 were perceived as enjoying the group more than those from Team 1, the same Team  $\times$  Confederate Role interaction found on the other four trait questions, and an effect for conditions, indicating that the confederates were perceived as enjoying the group somewhat less in the no-threat than in the threat or restoration conditions.

Thus, in general, attempting to threaten the subjects' freedom caused the threatener to be rated less favorably than when he did not threaten their freedom, and restoring the subjects' freedom caused the restorer to be rated more favorably than when he did not directly restore their freedom.

#### DISCUSSION

The results showed quite clearly that when one confederate said, "Well, I think it's obvious that we'll work on task. . . . There's really no question about it!" the tendency of subjects was to indicate a preference for the opposite task, and when the above statement was followed by the second confederate saying, "Wait just a minute. I really haven't made up my mind about the two tasks yet," the tendency of subjects was to indicate a moderate preference for the task supported by the first confederate. The results are consistent with our contention that the statement of the first confederate threatens the subject's freedom to support the opposite task to that which is recommended, and the consequence is that the subject experiences reactance and a resultant increase in desire to work on the opposite task. However, when the first confederate's statement is immediately followed by the second confederate's statement, the freedom of the subject is restored, and the subject will experience little or no reactance or consequent tendency to support the opposite task. Rather, the subject may then respond to whatever other social influence forces are operating in the situation. The fact that the subjects then tended

to express a preference in agreement with the statement of the first confederate suggests that they found his decisiveness fairly persuasive. Thus, the results support reactance theory, and in addition, they suggest that with a typical reactance-arousing social influence statement, there may be "positive" forces operating in a direction opposite to reactance motivation. Presumably, the resultant behavioral tendency is a summation of these opposing forces.

An alternative interpretation of the present experiment can be constructed on the assumption that when the threatener attempted to usurp the group decision and the experimenter intervened, the intervention was seen by the subject as disapproval by the experimenter of the threatener and/or his stated preference. Similarly, the experimenter's intervention in the restoration condition might have been seen as disapproval of the restorer or his (neutral) position. Thus, the subjects' preferences in opposition to the threatener in the threat condition and in opposition to the restorer in the restoration condition might be interpreted as siding with the apparent view of the experimenter. Of course, the apparent disapproval by the experimenter of either the threatener or restorer would plausibly affect not only the task preferences of the subjects but also their ratings of the two confederates. However, neither ratings of task competence nor of liking support the view that subjects were responding to apparent disapproval of the confederates by the experimenter. It seems safe, therefore, to conclude that the task preferences of subjects cannot be explained in terms of attributed disapproval on the part of the experimenter when he intervened in the group discussion.

Given the relatively low ratings of the threatener in the restoration condition, it is interesting that subjects in this condition tended to agree with his statement of preference. However, in the light of the relative neutrality of the restorer and of the subjects themselves, it may not be too surprising that subjects were moderately influenced by the strong position of the threatener.

#### *Failure of the Power Manipulation*

A surprising result was the complete failure of the power manipulation to affect the subjects' preferences. There was not the slightest bit of support for the hypothesis that the more votes the restorer held, the more his freedom-restoring statement would effectively restore freedom for the subject. Specifically, when the restorer had only two votes and the threatener and the subject each had five, it was impossible for the restorer's votes to affect the outcome, since eight votes (two-thirds) were needed for a decision. But the preference of subjects in this condition was no different from that in which the restorer had five votes or eight votes, and this lack of difference suggests that the subjects in this condition felt their freedom to be as fully restored as the subjects who were exposed to the restorers with more votes. Apparently, then, the subjects were responding not so much to the voting power of the restorer as to the simple fact that he spoke out against the threatener's attempted usurpation of choice. In effect, the restorer's statement reopened discussion on which task the group should work, a function that did not depend on his voting power; and the group decision, which did depend on voting power, may have been seen as in the remote future. At the time of the threatening and restoring statements, the subject was still expecting some group discussion prior to a group decision (the casting of votes). It is plausible, then, that the power manipulation failed to have any effect, because the number of votes held by the restorer was irrelevant to the specific act of reopening group discussion and holding the decision in abeyance.

Although the power manipulation failed to have its expected effect, the present experiment has demonstrated rather clearly that a threatened freedom can be restored by immediate direct intervention of another person. Furthermore, when freedom was restored, the freedom-threatening statement was shown to have positive influence effects. Theoretically, as noted earlier, freedom can also be restored by social implication, and the psychological effects should be similar.

## EXPERIMENT II

The second experiment was designed to test the idea that freedom to choose a particular alternative can be restored by social implication. In general, what is necessary is that someone act so as to imply that the freedom which has been threatened has been restored. While there may be many ways for one person to imply the recovery of freedom for another, the way selected for the following experimental test was to threaten the same freedom for two people and then to let one of them observe the other publicly reestablish his own freedom. The hypotheses were: (a) When the freedom to select an alternative is threatened with elimination, reactance will be aroused, and the alternative will consequently tend to become more desirable; (b) when the freedom to select an alternative has been threatened, the more that freedom has been restored by social implication, the less will be the increase in desirability of the alternative.

*Method**Subjects*

Forty-two male subjects were recruited from introductory psychology courses at Duke University to participate in an experiment labeled "Problems in Industrial Relations." The data from 6 subjects were not included in the final analysis: 4 because they were acquainted with the confederates, 1 because he expressed suspicion about the experiment during debriefing, and another because he failed to perceive the manipulation. Subjects were assigned to conditions at random, with the restriction that there be 12 in each condition.

*Procedure*

As in the first experiment, subjects were run in three-person groups, two members of which were confederates. The choice for each subject was between the same two case studies, and after the subjects had read the cases, they either filled out the dependent measures (no threat), heard one of the confederates try to usurp their choice (threat), or heard the attempted usurpation followed by the other confederate's restoration of his own freedom (restoration). Exactly the same statements were used for threat and restoration as in the first experiment. The following differences in procedure may be noted: (a) The ostensible purpose of the study was to test how well subjects worked on the leadership test under varying conditions. Subjects were told that they were to choose one of the two tasks to work on, and that while there might be time for them to discuss the two tasks before their decisions,

TABLE 5

PERCEIVED TASK PREFERENCES OF THREATENER AND RESTORER

Condition	Threatener	Restorer
Threat ( $n = 12$ )	5.67 <sup>a</sup>	16.17 <sup>a</sup>
Restoration ( $n = 12$ )	3.16 <sup>a</sup>	16.58 <sup>a</sup>
No threat ( $n = 12$ ) <sup>b</sup>	15.50	

<sup>a</sup> A 31-point scale was used, with scores in the threat and restoration conditions below 16.00 indicating preference for the task demanded by the threatener and scores over 16.00 indicating preference for the task opposite to that demanded by the threatener.

<sup>b</sup> Average score of ratings given to both confederates in the no-threat condition.

they were to make individual decisions and would work on their chosen tasks alone and in separate rooms. (b) Subjects in the no-threat condition were told that there was no time for discussion. The groups in the threat and restoration conditions were interrupted as soon as the confederates had made their appropriate statements, and the experimenter explained that time was running short. (c) There was no manipulation of power. (d) Two confederates were employed, and their roles were alternated. The threatener was always blind as to whether or not freedom would be restored. (e) The questionnaires asked the subjects to rate the confederates only on capability and likability.

## RESULTS

As in the first experiment, it was found that the subjects in the no-threat condition had no strong preference for one task over the other. The mean rating on the question asking for the subjects' preference was 15.50, and 16.00 was the midpoint on the scale.

Subjects' perceptions of the confederates' preferences were also similar to those from the first experiment, as can be seen from Table 5. In the no-threat condition, both confederates were seen as having no strong preference for one task or the other. However, in the threat and restoration cells, the threatener was seen to strongly prefer the task that he demanded, while the restorer was not perceived as having any strong preference in either of these conditions. When the results of the threat and restoration conditions were subjected to analysis of variance, the success of the preference manipulation was indicated by a highly significant effect for the role of the confederate ( $F = 95.07$ ,  $df = 1/20$ ,  $p < .001$ ).



TABLE 6  
SUBJECTS' TASK PREFERENCES: EXPERIMENT II

Condition	<i>M</i>
No threat	15.50
Threat	21.92 <sup>a</sup>
Restoration	10.33 <sup>a</sup>

<sup>a</sup> Using a 31-point scale, scores in the threat and restoration conditions have been coded so that a mean below 16.00 indicates preference for the task demanded by the threatener, and a score over 16.00 indicates preference for the task opposite to that demanded by the threatener.

### Subjects' Task Preference

As in the first experiment, the main dependent measure was the question asking the subjects on which task they preferred to work. The results from this question and the analysis of the results are presented in Tables 6 and 7. The analysis is a simple one-way analysis of variance which was collapsed on the variable of which confederate played the role of threatener, since it was not possible to divide the no-threat condition along this dimension.

*The effect of the threat to freedom.* There was a highly significant main effect for condition ( $F = 7.97$ ,  $df = 2/33$ ,  $p < .005$ ). There was a tendency for subjects in the threat condition to prefer the task opposite to that demanded by the threatener (no threat versus threat,  $F = 3.48$ ,  $df = 1/33$ ,  $p < .10$ ). While this difference did not quite reach the traditionally acceptable level of significance, the analysis of the frequency of subjects choosing opposite the threatener in the threat condition was reliable ( $\chi^2 = 5.83$ ,  $df = 1$ ,  $p < .05$ ),<sup>4</sup> since 83% of the subjects chose the task opposite to that demanded. Thus, as in the first experiment, a threat to the freedom to choose a specific task motivated the subjects to choose that alternative.

*The effect of restoring freedom.* If freedom was restored through the implication of the second confederate's behavior, the subject's desire to have the threatened alternative should be less than that of subjects in the threat condition. The support for this hypothesis was strong, since subjects in the res-

<sup>4</sup> One subject was deleted from the analysis of the frequency data in the threat condition because he checked the midpoint of the scale, indicating no preference for one case or the other.

toration condition not only had significantly less preference for the threatened alternative than those in the threat condition ( $F = 15.92$ ,  $df = 1/33$ ,  $p < .001$ ), but also less than those in the no-threat condition (no threat versus restoration,  $F = 4.51$ ,  $df = 1/33$ ,  $p < .05$ ). Further, the frequency data indicate that 83% of the subjects in the restoration condition actually preferred the task demanded by the threatener ( $\chi^2 = 4.17$ ,  $df = 1$ ,  $p < .05$ ). Thus, as in the first experiment, not only did the restoration of freedom reduce the reactance effect, but the subjects in the restoration condition showed a reliable tendency to prefer the demanded alternative.

*Perceived characteristics of the threatener and restorer.* The results from the questions asking the subjects to rate how capable they felt the confederates were and how much they liked them are presented in Table 8. The ratings of the two confederates in the no-threat condition were similar. However, when the ratings in the threat and restoration conditions were subjected to analyses, it was found that the threatener was liked significantly less than the restorer ( $F = 10.97$ ,  $df = 1/20$ ,  $p < .005$ ), and was seen as somewhat less capable than the restorer ( $F = 3.81$ ,  $df = 1/20$ ,  $p < .10$ ). The results on these two questions, then, are similar to those found on the same questions in the first experiment.

### DISCUSSION

The results of both studies give clear support to the hypothesis that restoration of freedom reduces the increase in desirability which results from a threat to freedom: the first study demonstrating the effectiveness of direct restoration by another person, the second study demonstrating the effectiveness of restoration by social implication. Furthermore, both studies demonstrated that when reactance had been reduced by the restoration

TABLE 7  
ANALYSIS OF VARIANCE FOR SUBJECTS'  
TASK PREFERENCES

Source	<i>df</i>	<i>MS</i>	<i>F</i>
Condition	2	403.08	7.97*
Within error	33	50.57	

\*  $p < .005$ .

TABLE 8  
PERCEIVED CHARACTERISTICS OF THREATENER AND RESTORER

Characteristic	No threat <sup>a</sup>	Threat ( <i>n</i> = 12)		Restoration ( <i>n</i> = 12)	
	( <i>n</i> = 12)	Threatener	Restorer	Threatener	Restorer
How capable <sup>b</sup>	12.21	12.00	11.50	13.00	10.00
How well liked <sup>c</sup>	14.62	15.92	11.92	15.66	13.84

<sup>a</sup> Scores of ratings for the two confederates combined in the no-threat condition.

<sup>b</sup> 1 = "Very capable," 31 = "Not at all capable."

<sup>c</sup> 1 = "Very much," 31 = "Not at all."

of freedom, the freedom-threatening statement produced a moderate amount of positive influence. This latter finding tends to confirm earlier conjecture (e.g., Brehm & Senenig, 1966) that social-influence threats to freedom of the kind used in the present research ("we will all choose X") create a combination of positive and negative forces, and the resultant behavior is a function of these opposing forces.

It should be noted that the conditions necessary for restoration of freedom by social implication are fairly broad. In the second experiment, for example, the only tie between the subject and the restorer was their common experience of being exposed to a threat to their freedom. The restorer apparently acted in self-interest and did not acknowledge in any way that the subject was involved, yet this was apparently enough for the subject to respond as though his freedom had been restored directly.

In addition to supporting the reactance theory analysis of influence effects, the present experiments provided information about the effects on perceived characteristics of people who threaten and restore freedom. In both studies the person who carried out the threat tended to be rated as less competent and less likable, while the person who directly restored freedom (in the first experiment, not in the second) tended to be rated more competent and likable. However, none of the effects on perceived characteristics was very large.

It is interesting to note that when the freedom to choose the less attractive of two or more alternatives is threatened, the individual is placed in a situation of conflict. In order to reestablish his freedom to choose the less

attractive alternative, he must actually choose that one. However, while the result of this choice may be a restoration of freedom, it also results in the individual committing himself to an unattractive alternative. The restoration of freedom either through the direct intervention of another individual or through the implication of another's behavior offers a comfortable solution to the conflict. When freedom to choose a less attractive alternative is restored in this manner, the individual becomes free to choose the more attractive alternative, without admitting that he did not have the freedom to choose the less attractive alternative. Thus, the possibility arises that an individual whose freedom has been threatened may prefer to have it restored by another social agent, and may even seek out such an agent.

The present studies may also be viewed in the context of modeling. Rather different results are obtained, however, from typical modeling research (e.g., Bandura, Ross, & Ross, 1963), where the subject is found to emulate the model to greater or lesser degrees as a function of emotional arousal and observed reward contingencies. The present research indicates that an individual may tend to do the opposite of a model, unless a second model makes clear that the individual is free to do the opposite, in which case the individual shows some tendency to emulate the first model. What is different about the present case is that the individual presumably feels free to engage in either of the two behavioral alternatives before the first model acts, and the model actively pressures the individual to act one way rather than the other. Because typical modeling research involves neither a clear establishment of free-

dom prior to the modeling act nor active pressure in the modeling itself, it should arouse little or no reactance or consequent resistance to a positive modeling effect.

The comparison with modeling research points to some of the limits for generalizing the present findings. Reactance and its consequent effects can be expected only when a person feels that he has certain freedoms, that those freedoms are important to him, and that there is a definite threat to one or more of them. Pressure to behave in a particular way will not arouse reactance when it does not threaten or eliminate important freedoms. And, of course, without some threat to freedom, there can be no restoring of it.

The restoring of a freedom in situations that would otherwise result in reactance can have a strong effect on behavior, as seen in the present research, in which restoration changed the responses of subjects from over 80% negative to over 80% positive. It may

be, however, that restoration of freedom would have little or no effect if its occurrence were delayed rather than immediate, and further research should address the problem of timing. Quite clearly, further work should also be done to determine what makes a person effective in restoring freedom, and in particular, the role of the restorer's power should be examined more closely, as well as the variables that may affect social implication.

#### REFERENCES

- BANDURA, A., ROSS, D., & ROSS, S. A. Imitation of film-mediated aggressive models. *Journal of Abnormal and Social Psychology*, 1963, 66, 3-10.
- BREHM, J. W. *A theory of psychological reactance*. New York: Academic Press, 1966.
- BREHM, J. W., & SENSENIG, J. Social influence as a function of attempted and implied usurpation of choice. *Journal of Personality and Social Psychology*, 1966, 4, 703-707.
- MAYER, N. R. F. *Psychology in industry*. Cambridge, Mass.: Riverside Press, 1955.

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- Sex, Dependency, and Helping: Charles L. Gruder\* and Thomas D. Cook: Department of Psychology, Box 4348, University of Illinois at Chicago Circle, Chicago, Illinois 60680.
- The Urban Alienations: Some Dubious Theses from Marx to Marcuse: Melvin Seeman\*: Department of Sociology, University of California, Los Angeles, California 90024.
- Distribution of Insufficient, Sufficient, and Oversufficient Rewards: A Clarification of Equity Theory: Irving M. Lane and Lawrence A. Messé\*: Department of Psychology, Olds Hall, Michigan State University, East Lansing, Michigan 48823.
- Dimension of Trait Preferences and Personality Type: Emil J. Posavac\*: Department of Psychology, Loyola University, 6525 North Sheridan Road, Chicago, Illinois 60626.
- Observer Perseverance as Related to a Model's Success: A Social Comparison Analysis: Seymour M. Berger\*: Department of Psychology, University of Massachusetts, Amherst, Massachusetts 01002.
- Effects of Furniture Arrangement, Props, and Personality on Social Interaction: Albert Mehrabian\* and Shirley G. Diamond: Department of Psychology, University of California, Los Angeles, California 90024.
- Ability Attribution and Impression Formation in a Strategic Game: A Limiting Case of the Primary Effect: Robert G. Jones\* and James B. Welsh: Department of Social Relations, Lehigh University, Bethlehem, Pennsylvania 18015.

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