

ATTRIBUTIONS FOLLOWING INFLUENCE ATTEMPTS:  
A COGNITIVE, INFORMATIONAL APPROACH

by

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Much of the research concerning the attribution of causality for a person's behavior has focused on cases in which there is no interaction between the subject and the person about whom causal attributions are to be made. This is exemplified by studies on attribution of responsibility (Feather, 1969; Reisman and Schopler, 1973), differences in attribution between the actor and the observer (Jones and Nisbett, 1971; Nisbett, Caputo, Legant, and Marecek, 1973), and the attribution of attitudes (Jones and Harris, 1971; Jones, Worchel, Goethals, and Grumet, 1971). In these studies, subjects were typically asked to read about the behavior of a fictitious stimulus person with whom they had no interactions, and then asked to make certain kinds of attributions about the stimulus person's behavior. In our everyday lives however, it is probably true that the people we are most interested in making attributions about are the people with whom we must interact.

One common kind of interaction occurs when we make attempts to influence or change another person's behavior. For example:

Dear Abby,

I have been married to Joe for three years and I'm almost going out of my mind as a result of this habit Joe has.

Whenever we have company over, Joe keeps talking and talking until our company is bored to death and a whole

beautiful evening is spoiled. We've lost I don't know how many friends this way. And don't think that I haven't tried changing him. I've tried every way I know to get him to change - I've threatened him with divorce, I've tried reasoning with him ... but none of my efforts are of any avail. He seems to be born this way and there's nothing I can do to change it.

I really love Joe but this habit of his is ruining our whole social life and driving me up the walls. What should I do?

A desperate wife.

The above fictitious example illustrates an important and frequent kind of interaction - that of an attempt by one person to change the behavior of the other. Whether these attempts succeed or fail may have serious implications for the causal attributions of the other's behaviors and for attributions of personality traits to the other, and thus, may affect the subsequent behaviors of the behavior modifier towards the other. For example, if the wife in the previous example saw the failure of her husband to change as her own fault (self-attribution), she might want to change some of her own behavior patterns. But if she saw it as her husband's fault (other-attribution), then she might very well decide that he is an inconsiderate, socially inept person, give up trying to change him, and seek a separation.

The present experiment is intended to explore the kinds of causal attributions and trait attributions subjects might make about another person after attempting to influence (change) this other person's behavior. An attempt to change the behavior of another person may be defined as a situational (external) force acting on the other. Then, following Jones and Davis (1965), it is hypothesized that any behavior on the part of a person which is in the direction of a situational (external) force could be seen as caused possibly by the external force and/or by the person's personality characteristics (internal cause). Thus, after modifying another's behavior, we may be unsure to what extent the change in the other was caused by our change attempts (external forces) or by the person's internal characteristics (e.g., a decision to change, or his "true self" finally showing itself, a mood change, etc.). In other words, behavior which is in line with external causes may not be very informative about the "true" personality of the person. Under these circumstances, we would expect ratings of various traits which the person might have to be fairly moderate (not extreme) and made with little confidence.

On the other hand, Jones and Davis (1965) suggest that a behavior which is contrary to situational forces would be seen as definitely not caused by the external force, but instead caused by the person's characteristics. So, if we attempt to change another's behavior but he continues to

behave as usual, his behavior would be likely to be seen as due to internal factors (e.g., inability or unwillingness to change). Behavior which is contrary to situational pressure is likely to be quite informative about the person's true personality, and we would be willing to make extreme trait ratings with confidence.

Previous research in this area of attribution have provided substantial evidence for Jones' and Davis' hypotheses (Hastorf, Kite, Gross, & Wolfe, 1965; Strickland, 1958; Kruglanski, 1970). For example, in a very widely-cited study by Jones, Davis, and Gergen (1961), subjects were exposed to tape-recorded "job-interviews" in which the interviewee either behaved in a manner that was very much in line with the requirements of the occupational role, or in a manner that was very much out of line with these requirements. Although no measures of attributed causality were made, it was found that subjects rated the interviewee's traits with more extremeness and confidence when the interviewee's behavior was out-of-role than when it was in-role. Thus, behavior which is contrary to situational forces is more informative of true personality than behavior which is in line with situational forces.

It is hoped that the present study would shed light on the effects of an important, and rather specific situational cause - an attempt to change the behavior of another. Thus, the present study differs from work cited so far in that it is intended to investigate the attributions made following the subject's interaction with the stimulus person. And, this

interaction takes place in the context of the subjects' own attempts to change the stimulus person's behavior. More specifically, in the present study, the subjects were asked to attempt to reduce a stimulus person's anxiety through the administration of five relaxation procedures. The outcome of the influence attempts were varied: the stimulus person's anxiety level increased, remained unchanged, or decreased. It is hypothesized that the stimulus person would be seen as a more anxious person and be held more responsible for his anxiety level when the latter increased than when it didn't change, and when it remained unchanged than when it decreased. Also, it is hypothesized that as the subjects see the stimulus person as being more and more responsible for his change (or no change) in anxiety levels, they would also see the relaxation procedures and the therapist (the subjects themselves) as less responsible for the stimulus person's anxiety level.

A few studies have already investigated causal attributions following a behavior change attempt (Johnson, Feigenbaum & Weiby, 1964; Beckman, 1970; Ross, Bierbrauer, & Polly, 1974), but these studies were few in number and also conceptually and methodologically flawed. For example, in a study by Johnson et al. (1964), student-teachers were asked to instruct two fictitious students on multiplication arithmetic tasks. One stimulus person consistently performed well, while the second stimulus person either consistently performed poorly or started poorly but improved later on. The subjects were asked about their perceived locus of causality of the stimulus

person's final performance. It was found that for the stimulus person who consistently performed well, subjects attributed the good performance to factors inside the stimulus person rather than to factors external to the person. Further, subjects attributed the student's performance to factors inside the stimulus person when he was consistently poor in comparison to when he improved. Finally, subjects made more external attributions of causality when the stimulus person's performance improved than when it remained poor. If we view no change in performance as behavior contrary to the direction of situational force (teaching attempts), and improvement as behavior in line with situational forces, then these findings support the present hypothesis that behavior contrary to situational force is attributed to internal factors to a greater extent than behavior in line with situational forces.

In addition to measures of causality, Johnson et al. also asked subjects to rate the stimulus person on stable personality characteristics such as ability and understanding of the material. It was found that the consistently good student was rated more favorably than the improving student, who was in turn rated more favorably than the consistently poor student. These results could be interpreted as showing that behavior which is not in line with situational forces (no improvement following teaching) is seen as more indicative of true personality, and thus leads to more extreme attributions of traits (very little ability or understanding) than behavior which is in line with situational forces (Jones and Davis, 1965).

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An alternative explanation is that the extent to which a person is seen as having some trait is a direct function of the overall average level of the trait which he has shown (Anderson, 1973). Thus, the consistently good student has a higher average performance than the improving student, and the latter has a higher average performance than the consistently poor student (see Fig. 1a).

Fig. 1a: Johnson et al. (1964) study

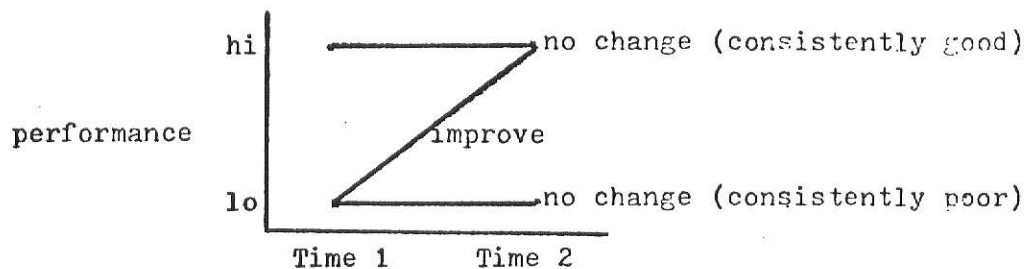


Fig. 1b: Beckman (1970) study

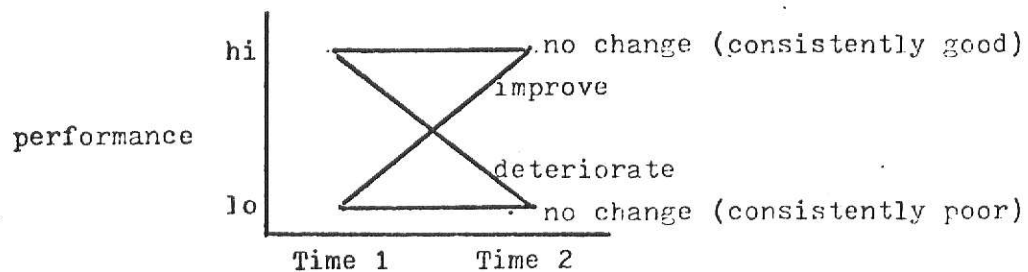
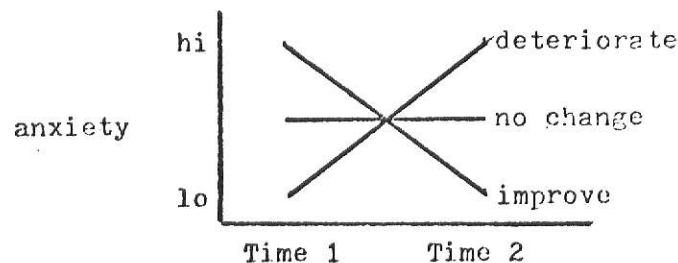


Fig. 1c: Present study



Beckman (1970) did a very similar study to Johnson et al. with one modification in the design: in addition to the three experimental conditions in which the stimulus person's performance was seen as either consistently poor, consistently good, or improving, a fourth experimental condition showed the stimulus person's performance deteriorating despite teaching efforts (see Figure 1b). Beckman succeeded in partly replicating the Johnson et al. results. For example, she asked her subjects to judge the stimulus persons on ability, and found that ability was rated higher for the consistently good student than for the improving student, and higher for the latter than for the consistently poor student. Again, the ability ratings may have been a result of the stimulus person's overall average performance, or may have been a result of attributing more extreme traits (either positive or negative) when behavior is contrary to situational forces.

The fact that overall average performance differed across conditions in both the Johnson et al. and Beckman studies produces two serious conceptual problems. First, as has already been pointed out, trait ascriptions to the stimulus person could have been based on either average performance or attributional inferences from situational causes, but it is impossible to know which. Second, if ability inferences were based on average performance, the subject could be making

causal attributions as a consequence of ability inferences, rather than making causal attributions from assessing the environment and then ascribing traits. For example, if the consistently good (poor) student is initially seen as high (low) in ability (based solely on performance), then there is no reason to seek external reasons to explain his performance. But, the improving student is seen as changing in ability, and so the environment is searched in order to find some external reason for this behavior change.

To take care of these problems in the present study, it was arranged for the average performance to be the same across all patterns of behavior (see Figure 1c). In addition it would appear necessary to include three groups in the design - consistently average, improving, and deteriorating in performance. If mere change in performance is a cue to find an environmental cause, then the improving and deteriorating student's performance ought to be attributed primarily to external factors. One would then suspect that ability inferences based on performance determined causal attributions. However, if behavior is initially seen in the context of situational forces, then the deteriorating performance (most contrary to situational forces) would be seen as internally caused and the improving performance (most in line with situational forces) would be seen as mainly externally caused. In this case, one would have evidence that differential causal ascriptions lead to differential trait attributions (rather than vice-versa).

Recall that Beckman (1970) did include a stimulus person whose performance deteriorated. She found that the deteriorating performance was seen as due less to the teaching attempts than was the improving performance. Thus behavior change contrary to situational forces is seen as due less to these forces than is behavior change which is in line with situational forces.

Beckman, however, interpreted these findings on teaching as a cause as due to motivational bias. In other words, when subjects saw deterioration in the stimulus person's performance, they might also have seen themselves as failing in their teaching efforts. The affective significance of such failure might have reduced the extent of attribution of causality to teaching attempts because subjects wished to maintain self-esteem. Although the present formulation is based on an informational approach to attribution, the notion that motivational factors might play a part in the attribution process is certainly not new in the attribution literature (e.g., Kelley, 1967). The typical research done on "ego-defensive" attribution usually involve a comparison between actors and observers, in which the observers are expected to have no motivational biases. However, the evidence to date for the existence of motivational bias in behavior change attempts has been equivocal at best. Gross (1966) and Polefka (1965) found that actors gave themselves more credit for success in a social influence situation than observers, thus supporting a self-esteem enhancement interpretation. Sherrod (1971), on the other hand, found the exact opposite in a situation where the

influence attempt involved teaching a concept-formation task. Also, in the Beckman (1970) study, it was found that for the improving student, actors attributed the improvement in performance more to the teaching factor than did observers, and Beckman interpreted this as supporting an ego-enhancing mechanism. Unfortunately, Beckman did not use yoked observers. Rather, her "observers" were given information in story form about a situation similar to the actor condition. Hence the information available to the actor and the observer, as well as the perspectives of the actor and the observer, were not comparable to start with. This difference in information and/or perspective between the actor and the observer could have been responsible for the differences in results for actors and observers (Jones and Nisbett, 1971; Bem, 1972). So, Beckman's failure to rule out other non-motivational factors in accounting for the differences between the actor and the observer weakens her interpretation of ego-relevant attribution.

In a recent study by Ross et al. (1974), the motivational bias hypothesis was once again tested. Actors and observers were compared on their ratings of the importance of teacher factors and student factors in accounting for either success or failure in teaching an 11-year old boy a spelling task. Contrary to the implications of the motivational bias hypothesis, it was found that subjects rated student factors as more important in success than failure conditions and teacher factors as more important in failure than success conditions. However, apart from the stimulus person's final performance after

their teaching efforts, the only other piece of information subjects were given was that the stimulus person was a typical, average student. It is possible that subjects could have inferred from this latter piece of information that the stimulus person was of average learning ability, and the salience of this information about the stimulus person's learning ability might have inhibited the operation of motivational bias mechanisms.

The status of the motivational bias proposition in attribution research is perhaps best summarized in a review article by Miller and Ross (1975). They concluded that:

On the whole, the interpersonal influence studies seem to provide little evidence to support the assertion that perceptions of causality are distorted in the service of self-protection or self-enhancement. The only finding to receive considerable empirical support is that people are more likely to perceive that they have influenced a target person's improvement than that they have produced his repeated failure. As noted earlier, however, this finding need not be interpreted in motivational terms. The self-enhancing effect is readily interpretable by an information processing model which assumes that attributions are determined by intentions, expectations, and the perceived covariation between behavior and outcome. (Miller and Ross, 1975, pg. 216)

Nevertheless, despite the inconclusive findings of these interpersonal influence studies and the questionable status of the motivational bias proposition, this proposition is still interesting and relevant to the present study since motivational bias mechanisms could perfectly account for the results that are presently predicted. For example, it is predicted that more causal attribution and more extreme trait-attribution would be made to the stimulus person when

subjects witnessed a deterioration in performance than when they witnessed improvement following their behavior change attempts. This is predicted from the present formulation since an improvement following a behavior modification attempt is behavior in the direction of situational force and hence less indicative of true personality than when there is no change, while a deterioration following a behavior modification attempt is behavior contrary to the direction of situational force and hence more indicative of true personality than when there is no change. But identical results would be predicted from a motivational bias approach, in which deterioration could be viewed as reflecting failure and improvement as reflecting success of the subjects' attempts. So, in order to measure the possible effects of motivational bias, an actor-observer variable was introduced into the present study. The observer-subjects had the same information and the same perspective as the actors - i.e., they sat beside the actors and perceived everything that went on in the experiment the same way the actors would perceive them. The only difference was that since the actors were involved in the selection and administration of the relaxation procedures, the outcome of the behavior modification attempts should be more relevant to their self-concept than to the observers' self-concept. If the situational forces formulation, and not the motivational bias formulation, is truly descriptive of the subjects' attribution process, then no differences in attribution between actor- and observer-subjects would be expected since the

situational forces formulation is based on a purely rational, informational approach. On the other hand, if motivational factors do bias the subjects' attribution judgements, then differences between the actor- and the observer-subjects would be expected: actors should attribute successful change attempts more to themselves, and unsuccessful attempts more to the method or the stimulus person, compared to observers.

Even when a motivational bias explanation for the predicted results can be ruled out by comparing actor- and observer-subjects, still another factor could account for the results that were predicted. In an article on order effects in impression formation, Jones and Goethals (1971) discussed the occurrence of primacy and recency effects and proposed that the attribution process is systematically affected by the order in which the information is received. In the present experiment, the information that the subjects received were the self-reported anxiety ratings of the stimulus person following the subjects' relaxation attempts. If a recency effect was operating, the information about the stimulus person's increase (or no change, or decrease) in anxiety over time may be integrated with the later information weighed more heavily, which would result in a higher trait-anxiety rating by the subjects for the stimulus person reporting an increase in anxiety than for the stimulus person reporting no change in anxiety, which in turn would be higher than for the stimulus person reporting a decrease in anxiety (even though the average anxiety levels were identical in all three cases - see Figure 1c). In other words, the

subject's relaxation attempts (situational cause for the anxiety level of the stimulus person to change) might not be a relevant factor at all in the subjects' attribution judgements. This recency effect explanation is rendered even more plausible in view of the fact that anxiety, the trait about which attribution is made, is an unstable trait. Jones et al. (1971) for example, demonstrated in a study that when the entity that is the target of attribution is unstable or changing, subjects tended to be more biased by a recency effect.

Since it is not possible within the realm of the present experimental design to remove the possibility of recency effects, another independent variable was introduced to differentiate between the explanation of recency and that of the present situational forces formulation. In addition to subjects who were asked to make attributions about the stimulus person who was administered relaxation procedures, another group of subjects were asked to make attributions about a stimulus person who was not exposed to any relaxation procedures. So, all subjects had identical information about the stimulus person's self-reported anxiety ratings, with the exception that half of the subjects thought that the stimulus person had been exposed to behavior modification attempts (situational cause salient for behavior change), while the other half thought that the stimulus person had not been exposed to any influence attempts (no situational cause for behavior change). If recency was the only factor that was

operating, no differences in attribution would be expected between subjects who learned of the stimulus person's anxiety levels in the context of the relaxation attempts and subjects who learned of the stimulus person's anxiety levels in the absence of any relaxation attempts. On the other hand, if the situational forces formulation is correct, it would follow that the stimulus person's behavior in the presence of salient situational causes would elicit more extreme trait-anxiety ratings of the stimulus person and less self-attribution of causality when the stimulus person's anxiety levels changed against the direction of situational causes (increase in anxiety) than when there is no change, and when there is no change than when there is a change in the direction of situational causes (decrease in anxiety). For subjects who saw the stimulus person's anxiety levels in the absence of any situational causes, the situational forces formulation is not applicable since there is no situational causes to provide a context for the behavior. Therefore no differences are predicted in the attribution made by subjects regardless of the anxiety levels reported by the stimulus person.

In summary, in the present study, it was hypothesized that behavior in the direction of situational force is seen as less indicative of true personality than behavior contrary to the direction of situational forces. The present hypotheses are supported to the extent that the following tendencies appear in the experimental results:

- 1) When the stimulus person's anxiety levels are seen in the context of relaxation attempts, more responsibility would be attributed to the stimulus person, and less responsibility would be attributed to external causes (the actor, the methods used) when the stimulus person becomes more anxious than when he remains anxious, and when he remains anxious than when he becomes less anxious.
- 2) Similarly, more extreme trait-anxiety ratings will be made of the stimulus person who becomes more anxious than when he remains anxious, and when he remains anxious than when he becomes less anxious, following exposure to relaxation procedures.
- 3) This pattern should hold for both actor-subjects who were actively involved in administering the relaxation procedures and for observer-subjects who were not actively involved.
- 4) For subjects who did not see the stimulus person's anxiety level in the context of any relaxation attempts, there will be no differences among the attributions they made when they saw the stimulus person's anxiety level increase, remain constant, or decrease. Again, this would hold true for both actor- and observer-subjects.

## METHOD

### Design

The experiment was a 3 x 2 x 2 completely factorial design. There were three levels of the stimulus person's reported level of anxiety (increase vs. no change vs. decrease), two levels of the salience of situational causes for anxiety reduction (present vs. absent), and two levels of the subjects' personal involvement (actor vs. observer).

### Subjects

The subjects were 70 male and 70 female introductory psychology students who attended Kansas State University.<sup>1</sup> All the subjects received experimental credit points for their participation. They were run in same sex dyads. The data from four female subjects were discarded because they failed to follow the instructions or were suspicious of the experimental manipulations.

### Procedure

The study was conducted in two adjacent but separate rooms. Upon the arrival of two subjects and the male confederate (posing as another subject), they were ushered into one room. There, after a rigged drawing of lots, the confederate was always assigned to stay in the same room and be the stimulus person, while one subject was randomly assigned to be the "actor", and the other subject to be the "observer". In the presence of the two subjects, the experimenter instructed the confederate to sit in the room and pay attention to a green light in front of him. He was told that whenever the green light came on, he should

report on the extent to which he had 10 different feelings (emotions) by pressing one of the buttons on the button-panel in front of him. The confederate was also given a list of the 10 feelings he had to report on, a sheet of written instructions, and a 1 to 20 scale upon which his ratings of his feelings were to be based.

The experimenter then led the two subjects into the adjacent experimental room. They were seated next to each other in front of a long table. On the table there was a light panel that was hooked up to the button-panel in the next room where the confederate was in, a button which when depressed would turn on the green light in the next room, a microphone, a cassette tape recorder, and 12 "relaxation procedures". Each relaxation procedure was actually a typed sheet of verbal instructions on achieving relaxation and reducing anxiety; four of these relaxation procedures involved playing a musical tape on the tape recorder. The experimenter then briefly explained to the subjects that the purpose of the study was to investigate what happens when non-professionals administer relaxation procedures to other people.

The actor-subject was given the following instructions:

You got the slip with the letter 'T' on it. That means that you will be playing the part of therapist and trying out these relaxation procedures. Here we have 12 relaxation procedures, some of them will include playing some of these music tapes. What I want you to do is to look over these relaxation procedures and pick out five that you think would work when you administer them to someone else. You can also try out some of the music tapes to hear what they sound like. Since these relaxation procedures all have to be read out very slowly, you might find that some of them will fit your reading style better than others. Please pick out the five that you think would be the best and then you will read them out loud slowly, just as a professional psychologist would read them in getting a patient to be relaxed.

The observer-subject was given the following instructions:

You got the slip with the letter 'O' on it. That means that you will be playing the part of an observer in this experiment. As an observer, what we want you to do is to just sit back and WATCH what the therapist does. Please realize that you are playing as important a part in this experiment as the therapist. As we said in the beginning of the experiment, we are interested in what happens when nonprofessionals use these relaxation procedures. The therapist will be asked questions about these procedures at the end of the experiment. In addition, we need an unbiased, objective observer - you. So please pay close attention to what goes on throughout this experiment. Thank you.

Both subjects were told that the relaxation procedures had been previously found to be 90% effective in reducing anxiety. After the actor-subject (therapist) had picked out five relaxation procedures, he/she was instructed to push the button to turn on the green light in the next room each time after he/she administered one relaxation procedure, and both subjects were told that they could find out how anxious the confederate in the next room felt by noting the last light that appeared on the light-panel before them. They were further instructed to remember what these anxiety levels were since they would be required to recall them at the end of the experiment. Furthermore, half of the subjects were led to believe that the relaxation procedures tried out in the experimental room were heard by the confederate in the next room, while the other half were led to believe that the relaxation procedures cannot be heard by the confederate in the next room.

Subjects in the "situational cause present" condition were told:

As you have already guessed by now, the relaxation procedures you read out will be heard by the person in the other room. When I turn that switch on, the microphone in front of you will pick up the relaxation procedures you read out and transmit them to the loudspeaker in the other room. Of course, the person in the other room is not told that what he/she will hear are relaxation procedures designed to reduce anxiety. But it is important for you to realize that the information you get is on how anxious the person in the other room feels after he/she has been administered one of your relaxation procedures.

Subjects in the "situational cause absent" condition were told:

It is very important for you to realize that the relaxation procedures you are trying out will have nothing to do with how anxious the person in the other room is. The room that the other person is in is sound-proof and he/she cannot hear a word of what you say in here. For reasons that will be explained to you after the experiment, you will actually be doing two tasks:

- 1) trying out the relaxation procedures that you picked, and
- 2) finding out how anxious the person in the other room feels.

It is very important for you to realize that despite the fact that you are doing both tasks in this experimental session, these two tasks are by no means related to each other in any way. The relaxation procedures you are trying out will not in any way affect how anxious (nervous) the person in the other room feels.

At this point, the experimenter went behind a partition in the experimental room so that he was no longer in direct visual contact with the subjects. He maintained no contact with the subjects throughout their administration of the relaxation procedures, and came out from behind the partition only when it was time to administer the dependent measure questionnaires to the subjects. This precaution was taken because since the experimenter was no longer blind to what conditions the subjects were in after he read the verbal instructions to them, it was important to eliminate any opportunity for him to unintentionally bias the subjects.

After the administration of each relaxation procedure, the subjects were given feedback on the confederate's anxiety level. This feedback was relayed by a light indication a number between 1 and 20. The subjects were led to believe that the lights accurately indicated the self-reported level of anxiety of the confederate, and that the higher the number that the confederate reported, the more anxious he felt. Actually, the feedback on the light-panel was manipulated by the confederate according to a pre-arranged schedule.

Subjects in the "anxiety level increase" condition saw the confederate's anxiety level increase over trials in the following pattern:

7   8   11   13   14   17

Subjects in the "no change" condition saw the confederate's anxiety level stay constant in the following fashion:

12   11   12   11   12   12

Subjects in the "anxiety level decrease" condition saw the confederate's anxiety level decrease over trials in the following pattern:

17   14   13   11   8   7

Note that the average reported level of anxiety in all three conditions were identical - 11.70. As was explained in the introduction, this served to eliminate a confound between the effects of overall level of anxiety and that of the change in anxiety itself.

After all five relaxation procedures had been administered and the subjects had received feedback on the confederate's anxiety level, they were asked to fill out the dependent measure questionnaire. When the questionnaires were completed, the subjects were questioned about any suspicions they might have about the experimental manipulations. Then all the subjects were given a complete account of the purposes and the use of deception in the study. In particular, assurances were given to the actor-subjects (therapists) that they were assigned randomly to the experimental conditions and so the outcome of the session should not be taken as any reflection on their actual abilities.

### Dependent Measures

The dependent measures consisted of a six-page questionnaire (see Appendix A). The primary dependent measures tested the subjects' attributions about the confederate, the relaxation procedures, and the therapist. For example, subjects would be asked:

To what extent do you feel (the person in the other room/ the relaxation procedures/the therapist) is responsible for how anxious the person in the other room felt at the end of the experiment?

There were also manipulation checks asking for the subjects' prior expectancy of success before administering the relaxation procedures and their liking for the confederate. Except for an open-ended question about possible reasons for the confederate's anxiety level, all dependent measures were based on a 20-point scale.

## RESULTS

A multivariate analysis of variance performed on all the dependent measures indicated that significant F's were present for all possible main effects and two of the possible interactions (see Table 1). Individual univariate analyses of variance were then performed on each of the dependent measures and the report of the results and subsequent discussions were confined to just the above main effects and interactions (see Table 2).

### Control Measures

Besides the primary dependent measures, the subjects' responses to manipulation checks and other control measures were also analysed and these will be reported in this section.

Analysis of the manipulation check on the subjects' expectancy of success in reducing the stimulus person's anxiety level revealed no differences among all experimental conditions. Also, the mean expectancy of success for all subjects was not significantly different from the expectancy of success that they were told to have ( $z = 1.60$ ,  $p < .05$ ).

It was also found that in the "Situational Cause Present" condition, subjects saw the therapist as trying harder and more responsible, and the relaxation procedures as being more effective and more responsible for the stimulus person's anxiety level than in the "Situational Cause Absent" condition. This was expected since in the Situational Cause Absent condition, the stimulus person was not exposed to any relaxation procedures administered by the therapist and so the above effort, effectiveness, and responsibility ratings would necessarily be extremely low for this condition (see Table 3).

## MULTIVARIATE F's FOR EACH MAIN EFFECT AND INTERACTION

Main effect or interaction term	Multivariate F	p less than
Level of anxiety	3.86	.001*
Salience of situational cause	109.23	.001*
Actor-observer	2.68	.006*
Sex of subject	4.43	.001*
Level of anxiety x Salience of sit. cause	2.42	.001*
Level of anxiety x Actor-observer	.94	.533
Level of anxiety x Sex of subject	.90	.593
Salience of sit. cause x Actor-observer	1.19	.305
Salience of sit. cause x Sex of subject	2.94	.003*
Actor-observer x Sex of subject	.56	.843
Level of anxiety x Salience of sit. cause x Actor-observer	1.26	.213
Level of anxiety x Salience of sit. cause x Sex of subject	.90	.583
Level of anxiety x Actor-observer x Sex of subject	1.55	.069
Salience of sit. cause x Actor-observer x Sex of subject	.85	.581
Level of anxiety x Salience of sit. cause x Actor-observer x Sex of subject	.93	.553

\* Multivariate F significant at .05 level

Table 2

UNIVARIATE  $F$ 's FOR THOSE MAIN EFFECTS AND INTERACTIONS  
WITH SIGNIFICANT MULTIVARIATE  $F$ 's ONLY

Dependent Measure	Level of Anxiety $F(1,112)$	Saliency of Sit. Cause $F(1,112)$	Actor- Observer $F(1,112)$	Sex of Subject $F(1,112)$	Level of Anxiety $\chi$ Saliency of Sit. Cause $F(2,112)$	Saliency of Sit. Cause $\chi$ Sex of $S$ $F(1,112)$
Stimulus Person's Responsibility	-	1.29	1.07	4.36	1.28	-
Therapist's Responsibility	1.52	331.15*	-	-	1.19	-
Relaxation Procedures' Responsibility	4.11*	360.74*	-	12.79*	3.94*	10.97*
Relaxation Procedures' Effectiveness	17.64*	249.44*	-	12.63*	16.10*	10.35*
Prior Expectancy of Success	-	-	-	1.37	-	-
Therapist's Effort	1.57	435.15*	6.47*	-	3.40*	-
Therapist's Ability	2.30	-	5.90*	8.73*	2.60	1.48
Stimulus Person's Anxiety as a Person	15.99*	-	1.22	-	1.13	-
Stimulus Person's Anxiety Disposition	13.96*	2.45	-	-	-	-
Liking for the Stimulus Person	-	1.29	-	5.64*	-	1.51

Note: Only those  $F$ -values greater than 1 are reported here.

\*  $p < .05$

Table 3

MEAN RATINGS ON THERAPIST'S EFFORT AND RESPONSIBILITY, AND  
EFFECTIVENESS AND RESPONSIBILITY OF THE RELAXATION PROCEDURES

Dependent Measure	Situational Cause Present	Situational Cause Absent	<u>F</u>
Therapist's Effort	12.83	1.27	431.01
Therapist's Responsibility	12.11	1.10	329.87
Effectiveness of the Relaxation Procedures	9.57	1.02	247.01
Responsibility of the Relaxation Procedures	11.69	1.00	358.77

Note: all the F-values are significant at .05 level

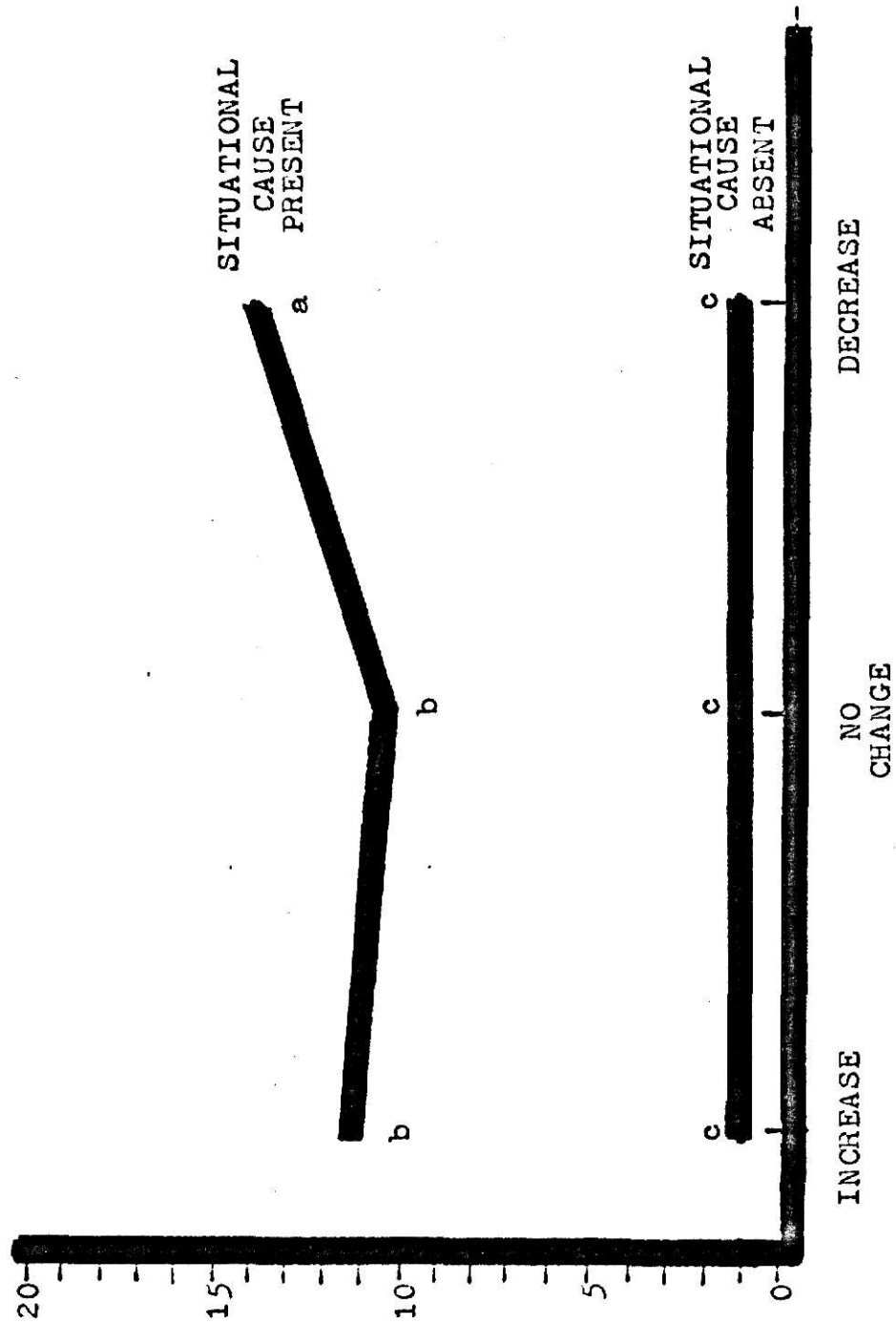
### Attribution of Responsibility

It was predicted that in the Situational Cause Present condition, subjects would rate the stimulus person as more responsible, and the external factors (therapist, relaxation procedures) as less responsible for the stimulus person's anxiety level when he became more anxious than when he remained anxious, and when he remained anxious than when he became less anxious. For the Situational Cause Absent condition, no differences in responsibility ratings were predicted among the stimulus person's different anxiety levels. Contrary to the predictions however, this Level of Anxiety X Salience of Situational Cause interaction was not significant for the attribution of responsibility to either the therapist or the stimulus person. For the measure on attribution of responsibility to the relaxation procedures, the predicted interaction was obtained: for the Situational Cause Present condition, the responsibility ratings were higher when the stimulus person's level of anxiety decreased than when his anxiety level remained constant or increased; for the Situational Cause Absent condition, the responsibility ratings were equally low for all three levels of anxiety (see Fig. 2).

A main effect for the Level of Anxiety variable was also present for the responsibility ratings on the relaxation procedures. Subjects who saw the stimulus person's anxiety level decrease rated the relaxation procedures as more responsible for the stimulus person's anxiety level than subjects who saw no change or an increase in the stimulus person's anxiety level ( $F(2,112) = 4.10, p < .05$ ). Although this main effect was not

Figure 2

MEAN RATINGS ON THE RESPONSIBILITY OF THE RELAXATION PROCEDURES  
FOR SITUATIONAL CAUSE PRESENT AND ABSENT CONDITIONS



STIMULUS PERSON'S ANXIETY LEVEL

Note. Two points sharing a similar subscript indicates no significant difference at  $p < .05$

predicted, it appeared to be due primarily to the Level of Anxiety X Salience of Situational Cause interaction.

The effectiveness ratings of the relaxation procedures were found to be identical to the responsibility ratings of the relaxation procedures: in the Situational Cause Present condition, the effectiveness ratings were higher when the stimulus person's level of anxiety decreased than when his anxiety level remained unchanged or increased; in the Situational Cause Absent condition, the effectiveness ratings were equally low for all three levels of anxiety. Again, there was a similar main effect for the Level of Anxiety variable ( $F(2,112) = 17.64, p < .05$ ).

There were also significant differences between male and female subjects for the responsibility ratings on the stimulus person and on the relaxation procedures, as well as for the effectiveness ratings on the relaxation procedures. These will be discussed later in a separate section under sex differences.

#### Attributions about the Stimulus Person

In addition to the prediction on attributions of responsibility, the prediction was also made that in the Situational Cause Present condition, subjects will attribute more of a trait of anxiety to the stimulus person when his anxiety level increased than when it didn't change, and when it didn't change than when it decreased; while in the Situational Cause Absent condition, there would be no differences among subjects who saw different levels of anxiety. However, analysis of the subjects' responses to questions on the extent they believed

the stimulus person was an anxious person and also the extent they believed the stimulus person had an anxious disposition did not yield the above predicted interaction. However, a significant main effect was obtained with the Level of Anxiety manipulation: subjects rated the stimulus person as being a more anxious person when his anxiety level increased than when it didn't change, and when it didn't change than when it decreased ( $F(2,112) = 15.99, p < .05$ ). Also, subjects saw the stimulus person as having more of anxious disposition when his anxiety level increased than when there is no change or a decrease in anxiety level ( $F(2,112) = 13.94, p < .05$ ). This pattern of results seemed to hold true for both the Situational Cause Present and the Situational Cause Absent conditions (see Tables 4 & 5).

A control measure on the liking for the stimulus person had been included because the subjects' liking for the stimulus person might be mediating their attributions about the stimulus person's trait-anxiety. For example, the stimulus person whose anxiety level increased might have been liked less than the stimulus person whose anxiety level decreased, and so subsequently be rated higher on the negative trait of anxiety than the stimulus person whose anxiety level decreased. However, an examination of the subjects' ratings on their liking for the stimulus person did not seem to support such a possibility: there were no differences in liking ratings among the there different levels of anxiety.

Table 4

MEAN RATINGS ON THE EXTENT THE STIMULUS  
PERSON IS AN ANXIOUS PERSON

	Level of Anxiety		
	Increase	No Change	Decrease
Situational Cause Present	13.04*	10.63*	10.46
Situational Cause Absent	12.75**	11.23**	9.44**

\* these two means were significantly different at .05 level by a direct-difference t-test.

\*\* these three means were significantly different at .05 level by a direct-difference t-test.

Table 5

MEAN RATINGS ON THE EXTENT THE STIMULUS  
PERSON HAS AN ANXIOUS DISPOSITION

	Level of Anxiety		
	Increase	No Change	Decrease
Situational Cause Present	12.83*	9.96*	10.00
Situational Cause Absent	13.80**	11.03**	10.44

\*,\*\* these two means were significantly different at .05 level by a direct-difference t-test.

The absence of a Level of Anxiety X Salience of Situational Cause interaction for the two dependent measures on the stimulus person's trait-anxiety casts serious doubts on the present experimental hypotheses. Recall that the Salience of Situational Cause variable was added to this study in order to differentiate between the present hypothesis and a recency-effect formulation: for the Situational Cause Present condition, both hypotheses would predict identical results. However, for the Situational Cause Absent condition, whereas the recency effect formulation would predict the same pattern of results as for the Situational Cause Present condition, the present formulation predicted significant differences between this condition and the Situational Cause Present condition. The results here appear to support a recency-effect formulation and disfavor the present hypothesis.

In an attempt to throw some light on why no differences were obtained between the Situational Cause Present and the Situational Cause Absent conditions (especially in view of the fact that the responsibility measures have shown that subjects could differentiate between the two conditions), the subjects' answers to the open-ended question about causal attributions were analyzed. This analysis was performed by first constructing a list of 11 reasons that were frequently given by the subjects in response to the above question. Two independent judges who were blind to the nature and conditions of the experiment were then asked to look at each subject's answer and decide on which category (or categories) of

reason it fell into. Interjudge reliability was found to be high (.84) and the number of these categories and the Chi-square for each category are reported in Table 6.

This frequency data indicated that subjects in the Situational Cause Present condition typically gave the effectiveness of the relaxation procedures and the nature of the experiment as reasons for the stimulus person's anxiety at the end of the experiment. Although on the whole subjects in the Situational Cause Present condition gave more reasons than subjects in the Situational Cause Absent condition, what was surprising was that a substantial number of subjects in the Situational Cause Absent condition (54 out of 64) were able to find situational causes as reasons for the stimulus person's change (or no change) in anxiety level. For example, when the stimulus person's anxiety level increased, many subjects in the Situational Cause Absent condition accounted for the increase with reasons like: he (the stimulus person) was wondering what was going on in the experiment, or he wanted to get the experiment over with and leave. Whereas when the stimulus person's anxiety level decreased, subjects in the same condition would attribute the decrease to the stimulus person getting used to the experimental procedures. So, there is a strong possibility that our Situational Cause Absent manipulation was not effective, since the subjects in this condition were still able to find situational causes (other than the relaxation procedures that they administered)

Table 6

NUMBER OF SUBJECTS WHOSE ANSWERS FELL INTO THE FOLLOWING CATEGORIES

Category	Situational Cause Present			Situational Cause Absent			$\chi^2$
	Increase in anxiety	No Change in anxiety	Decrease in anxiety	Increase in anxiety	No Change in anxiety	Decrease in anxiety	
He didn't know what was going on in the experiment.	3	7	5	0	8	5	8.85
He was wondering what was going on in the experiment.	5	1	0	11	7	3	18.56*
He didn't know what to expect.	3	2	5	3	6	7	4.47
He got used to the procedures of the experiment.	0	0	5	0	0	10	35.00*
The relaxation procedures weren't effective.	14	18	0	0	1	0	61.73*
The relaxation procedures were effective.	2	6	24	1	2	2	64.32*
It was the atmosphere of the experiment.	4	14	7	1	2	3	22.21*
Sitting there alone doing nothing except pushing buttons.	4	1	0	8	5	3	9.86
He wanted to get the experiment over with and leave.	2	0	0	12	3	0	38.46*
He was anxious about something not related to the experiment.	1	4	2	2	0	0	7.67
No reason was given.	5	0	7	1	12	8	18.45*

\*  $p < .05$

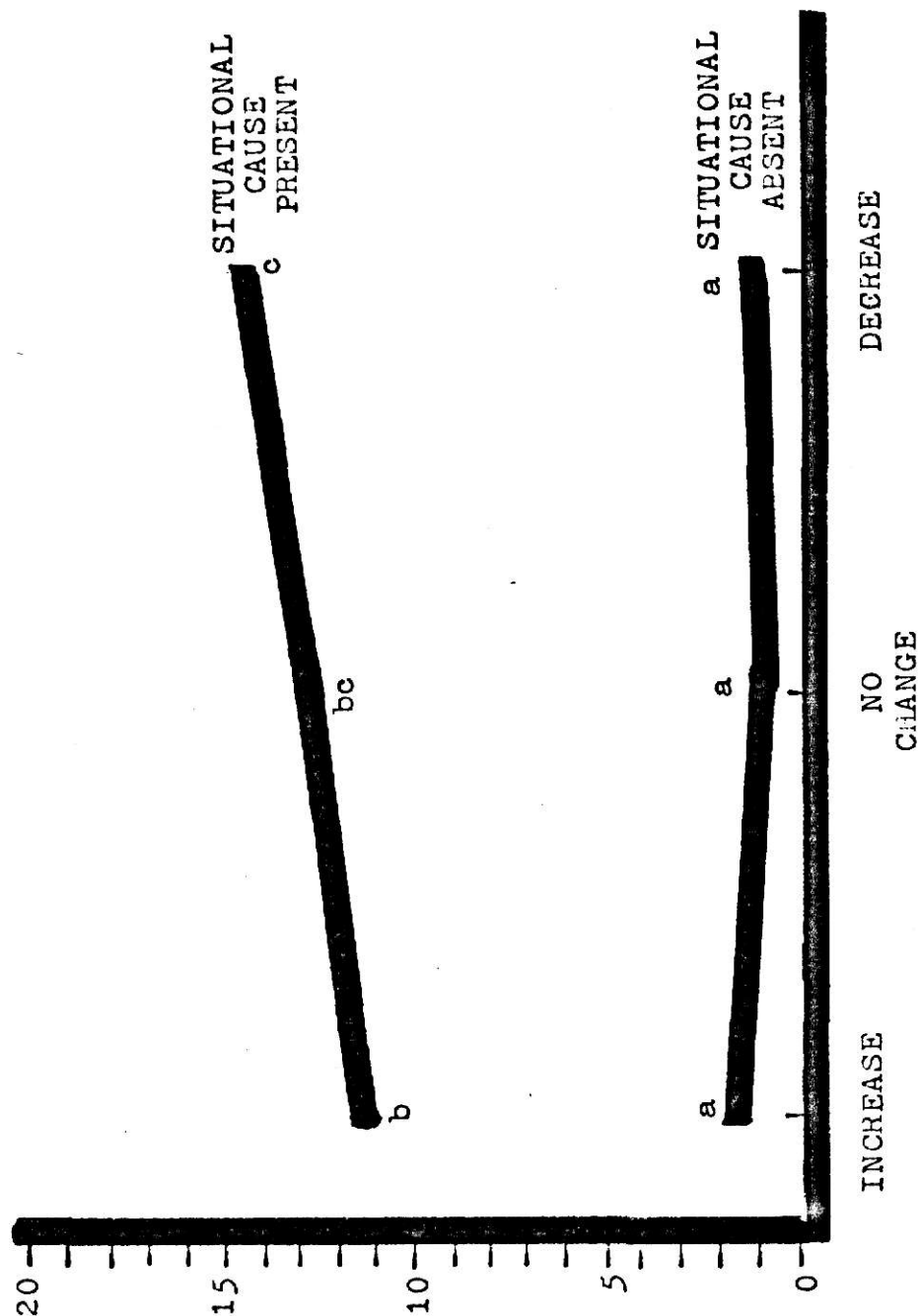
for the stimulus person's anxiety at the end of the experiment. To the extent that this could be happening, the lack of significant differences between the Situational Cause Present and the Situational Cause Absent conditions, as well as the lack of a Level of Anxiety X Salience of Situational Cause interaction for the stimulus person's trait-anxiety should come as no surprise.

#### Attributions about the Therapist's Ability and Effort

On a dependent measure in which attributions about the therapist's efforts (how hard he/she tried) was sought, a Level of Anxiety X Salience of Situational Cause interaction was present: in the Situational Cause Present condition, subjects saw the therapist as trying harder when the stimulus person's anxiety level decreased than when it didn't change, and when it didn't change than when it increased; in the Situational Cause Absent condition, the therapist was not seen as trying hard at all in all three anxiety level conditions. As was mentioned in the section on Control Measures, the low effort ratings in the Situational Cause Absent condition are understandable and to be expected since subjects in this condition were led to believe that the stimulus person was not exposed to any relaxation procedures. However, it appears that for the Situational Cause Present condition, subjects saw a positive relationship between the stimulus person's decrease in anxiety and how hard the therapist tried (see Figure 3).

Figure 3

MEAN RATINGS ON THE THERAPIST'S EFFORT FOR  
SITUATIONAL CAUSE PRESENT & ABSENT CONDITIONS



STIMULUS PERSON'S ANXIETY LEVEL

Note. Two points sharing a similar subscript indicated no significant differences at  $p < .05$ .

No actor-observer differences were predicted for any of the dependent measures. However, analysis of the data showed that there were significant actor-observer differences for the two measures on the therapist's effort and ability. On the measure on therapist effort, therapists gave themselves higher ratings for effort than observers did ( $F(1,112) = 6.47, p < .05$ ). The exact opposite pattern was found for the measure on the therapist's ability. Here, observers rated the therapists as being better at their tasks than the therapists themselves did ( $F(1,112) = 5.90, p < .05$ ).

#### Sex Differences

Analysis of the data showed that there were recurrent sex differences for the various dependent measures. As was reported earlier, male subjects rated the stimulus person as more responsible for his anxiety level than female subjects did ( $F(1,112) = 4.36, p < .05$ ). This, plus the finding that females indicated that they liked the stimulus person more than males did ( $F(1,112) = 5.64, p < .05$ ), seemed to indicate that females were more generous than males in their ratings of the stimulus person. Moreover, this generosity seemed to have extended to the therapist too, as evidenced by the finding that females rated the therapist as being better in administering the relaxation procedures than males did ( $F(1,112) = 8.73, p < .05$ ).

In addition, a Sex of Subject X Salience of Situational Cause interaction was also present for the responsibility and effectiveness ratings of the relaxation procedures. In the

Situational Cause Present condition, it was found that females rated the relaxation procedures as more effective and more responsible for the stimulus person's anxiety level than males did ( $t(1,70) = 4.70, p < .05$ ). In the Situational Cause Absent condition, since the stimulus person was not exposed to any relaxation procedures, the effectiveness and responsibility ratings across all levels of anxiety were at the lowest possible. Once again, this interaction also showed up as a main effect for the Sex of Subject variable for attribution of responsibility ( $F(1,112) = 12.79, p < .05$ ), and for attribution of effectiveness ( $F(1,112) = 12.63, p < .05$ ) of the relaxation procedures. The overall pattern of these sex differences thus seemed to indicate that female subjects tended to be more favorable and more generous than male subjects in their ratings of the experimental procedures and of the people associated with the experiment.

## DISCUSSION

### Attributions of Causality and Trait-anxiety

It was proposed that the administration of relaxation procedures to the stimulus person might be construed as a situational force acting on the stimulus person to become less anxious. Subsequently, it was predicted that in the context of these relaxation attempts, more causal attribution would be made to the stimulus person, and less causal attribution would be made to external factors (the therapist, the relaxation procedures used) when the stimulus person became more anxious than when he remained unchanged, and when he remained unchanged than when he became less anxious. Also, these differences were not predicted when the stimulus person's anxiety levels were not seen in the context of the relaxation attempts. Thus, one would expect a "Level of Anxiety X Salience of Situational Cause" interaction for dependent measures on the subjects' attribution of responsibility to the stimulus person, the therapist, and the relaxation procedures. The present results indicated that this interaction was significant only for the responsibility and effectiveness measures on the relaxation procedures. For these latter two measures, this interaction also showed up as a significant main effect for the Level of Anxiety variable. However, the lack of this predicted interaction for the causal attributions made to the stimulus person and to the therapist renders the other significant findings in the direction that was predicted only partially supportive of the present hypothesis at best.

Furthermore, it was hypothesized that the less one can attribute another person's behavior to external causes, the more one will attribute that person's behavior to his internal characteristics. In other words, when the stimulus person's anxiety level decreased following the relaxation attempts, this behavior is in line with the situational force and so more causal attribution will be made to the external force and less extreme trait-anxiety attributions will be made to the stimulus person than when his anxiety level increased following the relaxation attempts. Unfortunately, this hypothesis is not supported when we look at the subjects' attributions about the stimulus person's trait-anxiety. For the two measures of the extent to which subjects believed that the stimulus person was an anxious person, it was found that subjects rated the stimulus person as being a more anxious person when his anxiety level increased than when it decreased. Although this finding was in the direction that was predicted, what was disturbing was that this was found to be true for subjects in both the Situational Cause Present and Situational Cause Absent conditions. As a result, the predicted interaction was not obtained. Rather, there was a main effect for the Level of Anxiety variable.

As was mentioned earlier, the Situational Cause Absent condition was added to this study in order to differentiate between the present hypothesis and a recency-effect formulation. Since the present findings on the subjects'

attributions about the stimulus person indicated that there were no differences between the Situational Cause Present and Situational Cause Absent conditions as far as trait-anxiety ratings about the stimulus person are concerned, a recency-effect formulation appears to be supported.

Before one discards the situational forces hypothesis and accepts a recency-effect explanation however, there are other possible explanations for the present findings that deserve to be explored further. For example, there is some evidence that the stimulus person might be liked better when the subjects succeeded in reducing his anxiety level than when the subjects failed (Chaiken & Cooper, 1973; Dutton, 1973). If this is indeed the case, then when the stimulus person is liked less by the subjects, he might also be rated as more anxious because anxiety is a negative trait and not because of the change in anxiety level. However, an examination of the subjects' ratings on their liking for the stimulus person revealed no differences in liking ratings among all experimental conditions, including different levels of anxiety. So this explanation does not seem to be supported at all by the present data.

Analyses of the subjects' responses to the open-ended causal attribution question suggest another possible explanation for the absence of a Level of Anxiety X Salience of Situational Cause interaction in the present findings. The finding that subjects in the Situational Cause Present

condition used the effectiveness of the relaxation procedures to explain the stimulus person's anxiety level should come as no surprise since the relaxation procedures were the most salient situational cause present in this condition. What was surprising was the ability of the subjects to come up with various other situational causes to account for the stimulus person's anxiety level even in the Situational Cause Absent condition, where no situational cause for the stimulus person's change (or no change) in anxiety level was intended to be seen. It should be emphasized here that this finding does not imply that subjects were not able to distinguish between the Situational Cause Present and the Situational Cause Absent conditions. Far from it, the ability of subjects to distinguish between the two conditions is clearly established by the overwhelming differences found between the two conditions for dependent measures on the subjects' attributions about the therapist's responsibility and effort, and the relaxation procedures' responsibility and effectiveness. So, what appears to be happening is that subjects understood that in the Situational Cause Absent condition, the relaxation procedures did not have anything to do with the stimulus person's anxiety level, but they were still able to seek out other situational reasons for the stimulus person's change (or no change) in anxiety level. Thus, it would appear that the Saliency of Situational Cause manipulation has failed. Unfortunately, this means that within the context of the present experiment, one

is unable to determine whether the present results are due to a recency effect, or due to a manipulation failure. It can only be hoped that such a methodological flaw might be remedied in future studies.

#### Actor-observer Differences

No actor-observer differences were predicted and none were found for the primary dependent measures on attribution of causality and attribution about the trait-anxiety of the stimulus person. For the other dependent measures however, significant actor-observer differences were present for two measures of the therapist's effort and ability. On the measure of the therapist's effort, therapists gave themselves higher ratings for effort than observers did. This finding could be interpreted as the result of the operation of a self-esteem enhancing mechanism. On the other hand, the present finding could also be interpreted from a non-motivational, informational, approach in which different aspects of the available data are salient for actors and observers (Jones and Nisbett, 1971). Since the observers has no direct knowledge of what the actor is feeling about his efforts when he performs a particular behavior, while the actor does possess this intimate knowledge, it is possible that this difference in actor's and observer's information could have resulted in the therapists giving themselves higher effort ratings than observers did.

In addition, on the measure of the therapist's ability, it was found that observers rated the therapists as being better at their tasks than the therapists themselves did.

Again, from a motivational-bias point of view, this finding could be explained by postulating the operation of a self-esteem protecting mechanism: since the outcome of their tasks was not always successful, the therapists would try to avoid being blamed for any undesirable outcome by not acknowledging any responsibility on their own part. An alternative explanation is that therapists gave themselves lower ratings of ability than observers did because they thought that their self-ratings might be compared with other people's ratings of them and they did not want to appear conceited and boastful. Of course, like any other post hoc speculation, the trouble with the above interpretations is that they can neither be refuted nor accepted on the basis of the available experimental evidence.

#### General Conclusions

The present study was conducted to investigate the attributions made following the subject's interaction with the stimulus person. And, this interaction took place in the context of the subject's own attempts to change the stimulus person's behavior. It was hypothesized that behavior in the direction of situational force would be seen as less indicative of true personality than behavior contrary to the direction of situational force. To the extent that the present results indicated that subjects saw the stimulus person as a more anxious person following exposure to relaxation procedures when his anxiety level increased than when it decreased, this hypothesis seems to be supported. However, the finding that

this same pattern of results was present even when the stimulus person's behavior was not seen in the context of situational forces casts serious doubts on this hypothesis and actually renders the recency-effect formulation more plausible.

It was also hypothesized that when the stimulus person's anxiety levels are seen in the context of relaxation attempts, more causal attributions would be made to the stimulus person, and less causal attribution would be made to external causes (the therapist, the relaxation procedures) when the stimulus person became more anxious than when he remained unchanged, and when he remained unchanged than when he became less anxious. The results indicated that this was true only for the causal attributions about the relaxation procedures. For attributions about both the stimulus person and the therapist, these predictions were not borne out. So, this finding, in conjunction with the failure to obtain the results that were predicted for the subjects' attributions about the stimulus person's trait anxiety, really does not lend any support to the present hypothesis.

Recall that it was the intention of this study to show that the results of previous studies on attributions following influence attempts (e.g., Johnson et al, 1964; Beckman, 1970) could be interpreted, not from a motivational-bias point of view, but from a rational, informational approach. To the extent that the primary dependent measures on causal attribution failed to yield any significant actor-observer differences,

a motivational-bias hypothesis which would predict vast actor-observer differences certainly does not seem to be supported by the findings of the present experiment. On the other hand, the proposed hypothesis does not seem to be faring any better either, in view of our failure to obtain some of the results that were predicted. In fact, it would appear that the recency-effect formulation, which this study had intended to disprove, would be a more parsimonious explanation of the present findings: in making their attributions about how anxious a person the stimulus person is, subjects could simply be attaching more weight to the later part of the information which they were given on the stimulus person's levels of anxiety.

Finally, there were some surprising results in the present study that seem well worth noting. First, the subjects' ability to provide situational reasons for the stimulus person's behavior indicated that the Saliency of Situational Cause manipulation was not effective, and this could have accounted for the study's failure to produce the predicted results. Future studies of this nature should definitely be aware of the subject's ability to come up with situational causes for another person's behavior, even when such causes were not intentionally provided by the experiment. Also, this result by itself seems to warrant further studies on how subjects perceive various factors in the environment as possible causes for another person's behavior. Secondly, the pattern of sex differences found in the present study is also interesting. Typically,

except for research on interpersonal attraction and related areas, the Sex of Subject variable is usually not given that much attention. If it is true that in certain kinds of experiments female subjects tend to respond to the questions in a more favorable and generous way than male subjects do, further research is definitely needed to establish the characteristics of these experiments and the implications of such sex differences.

Footnotes

1. Originally 72 male and 72 female subjects were intended to be used, yielding 12 subjects per experimental condition. However, the confederate had to withdraw from the study for health reasons after 140 subjects were run. Also, the data from four female subjects were discarded in the study because debriefing indicated that they did not understand the instructions of the experiment. So the data presented here is for 136 subjects only.

# REFERENCES

- Beckman, L. Effects of students' performance on teachers' and observers' attributions of causality. Journal of Educational Psychology, 1970, 61, 76-82.
- Bem, D.J. Self-perception theory. In L. Berkowitz (ed.) Advances in Experimental Social Psychology, Vol. 6, 1972. Academic Press.
- Chaiken, A.L., & Cooper, J. Evaluation as a function of correspondence and hedonic relevance. Journal of Experimental Social Psychology, 1973, 9, 257-264.
- Dutton, D.G. Attribution of causes for opinion change and liking for audience members. Journal of Personality and Social Psychology, 1973, 26, 208-216.
- Feather, N.T. Valence of outcome and expectation of success in relation to task difficulty and perceived locus of control. Journal of Personality and Social Psychology, 1967, 7, 372-386.
- Feather, N.T. Attribution of responsibility and valence of success and failure in relation to initial confidence and task performance. Journal of Personality and Social Psychology, 1969, 13, 129-144.
- Gross, A. Evaluation of the target person in a social influence situation. Unpublished doctoral dissertation, Stanford University, 1966. Cited in Ross et al. (1974).
- Hastorf, A.H., Kite, W.R., Gross, A.E., & Wolfe, L.J. The perception and evaluation of behavior change. Sociometry, 1965, 48, 400-410.

- Johnson, T.J., Feigenbaum, R., & Welby, M. Some determinants and consequences of the teacher's perception of causation. Journal of Educational Psychology, 1964, 55(5), 237-246.
- Jones, E.E., & Davis, K.E. From acts to dispositions. In L. Berkowitz (Ed.), Advances in Experimental Social Psychology, Vol. 2. New York: Academic Press, 1965.
- Jones, E.E., Davis, K.E., & Gergen, K.J. Role playing variations and their informational value to person perception. Journal of Abnormal and Social Psychology, 1961, 63, 302-310.
- Jones, E.E., & Goethals, G.R. Order effects in impression formation: Attribution context and the nature of the entity. General Learning Press, 1971.
- Jones, E.E., Goethals, G.R., Kennington, G.E., & Severance, L.J. Primacy and Assimilation in the Attribution Process: the Stable Entity Proposition. Unpublished. Cited in Jones & Goethals (1971).
- Jones, E.E., Harris, V.A. The attribution of attitudes. Journal of Experimental Social Psychology, 1967, 3, 1-24.
- Jones, E.E., & Nisbett, R.E. The actor and the observer: Divergent perception of the causes of behavior. General Learning Press, 1971.
- Jones, E.E., Worchel, S., Goethals, G.R., & Grumet, J.F. Prior expectancy and behavioral extremity as determinants of attitude attribution. Journal of Experimental Social Psychology, 1971, 7, 59-80.

- Kruglanski, A.W. Attributing trustworthiness in supervisor-worker relations. Journal of Experimental Social Psychology, 1970, 6, 214-232.
- Miller, D.T., & Ross, M. Self-serving biases in the attribution of causality: Fact or fiction? Psychological Bulletin, 1975, 82, 213-225.
- Nisbett, R.E., Caputo, C, Legant, P., & Marecek, J. Behavior as seen by the actor and as seen by the observer. Journal of Personality and Social Psychology, 1973, 27, 154-164.
- Polefka, J.T. The perception and evaluation of responses to social influence. Unpublished doctoral dissertation, Stanford University, 1965. Cited in Ross et al. (1974).
- Reisman, S.R., & Schopler, J. An analysis of the attribution process and an application to determinants of responsibility. Journal of Personality and Social Psychology, 1973, 25, 361-368.
- Ross, L., Bierbrauer, G., & Polly, S. Attribution of Educational outcomes by professional and nonprofessional instructors. Journal of Personality and Social Psychology, 1974, 19, 609-618.
- Sherrod, D.R. Attribution of causal responsibility for behavior in actors and observers. Unpublished doctoral dissertation, Stanford University, 1971. Cited in Ross et al. (1974).
- Strickland, L.H. Surveillance and trust. Journal of Personality, 1958, 26, 200-215.
- Wortman, C.R., Constanzo, P.R., & Witt, T.R. Effect of anticipated performance on the attribution of causality to self and others. Journal of Personality and Social Psychology, 1973, 27, 372-381.

## APPENDIX A

### Dependent Measures

# **ILLEGIBLE DOCUMENT**

**THE FOLLOWING  
DOCUMENT(S) IS OF  
POOR LEGIBILITY IN  
THE ORIGINAL**

**THIS IS THE BEST  
COPY AVAILABLE**

The following are questions about the therapist you've been observing:

To what extent do you think that he/she is responsible for how anxious the person in the other room is at the end of the experiment? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

not at all  
responsible

moderately  
responsible

extremely  
responsible

How hard would you say he/she tried in getting the person in the other room to be less anxious? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

not hard  
at all

moderately  
hard

extremely  
hard

How good would you say he/she was in administering these relaxation procedures? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

not good  
at all

fairly  
good

extremely  
good

The following are questions about yourself:

To what extent do you feel that you are responsible for how anxious the person in the other room is at the end of the experiment?  
(circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
not at all								moderately								extremely			
responsible								responsible								responsible			

How hard would you say you tried in getting the person in the other room to be less anxious? (circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
not hard								moderately								extremely			
at all								hard								hard			

How good would you say you are in administering these relaxation procedures? (circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
not good								moderately								extremely			
at all								good								good			

The following are questions about the relaxation procedures:

How effective would you say the relaxation procedures were in getting the person in the other room to the point where he/she was at the end of the experiment? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

not at all  
effective

moderately  
effective

extremely  
effective

Before the relaxation procedures were tried out, do you remember how effective the experimenter said these methods were? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

not at all  
effective

moderately  
effective

extremely  
effective

To what extent do you feel the relaxation procedures are responsible for how anxious the person in the other room felt at the end of the experiment? (circle one)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

not at all  
responsible

moderately  
responsible

extremely  
responsible

**THIS BOOK  
CONTAINS  
NUMEROUS  
PAGES THAT ARE  
CUT OFF**

**THIS IS AS  
RECEIVED FROM  
THE CUSTOMER**

The following are questions about the person in the other room:

Based on what you've observed during this experimental session,

To what extent is the person in the other room an anxious person?  
(circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
not at all						to a moderate extent						to an extreme extent							

To what extent does the person in the other room have an anxious disposition (i.e., a tendency to be anxious)? (circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
not at all						to a moderate extent						to an extreme extent							

To what extent do you think the person in the other room is responsible for how anxious he/she felt at the end of the experiment? (circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
not at all responsible						moderately responsible						extremely responsible							

To what extent do you like or dislike the person in the other room? (circle one)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
dislike him/her very much						neither like nor dislike						like him/her very much							

ATTRIBUTIONS FOLLOWING INFLUENCE ATTEMPTS:  
A COGNITIVE, INFORMATIONAL APPROACH

by

JOHN HIU-FAI HUNG

B.S., University of Wisconsin, 1972

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AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of the

requirements of the degree

MASTERS OF SCIENCE

Department of Psychology

KANSAS STATE UNIVERSITY  
Manhattan, Kansas

1975

Research in the area of attributions following interpersonal influence attempts have frequently employed a motivational bias formulation in their interpretation of the findings. Thus, in a typical experiment of this type, if a person failed to change another person's behavior and subsequently made more causal attributions to the other person than if the change attempt had been successful, this might be interpreted as supporting the operation of a self-esteem defensive mechanism when one's change attempt failed. The present study proposed an alternative hypothesis for results like those described above based on a cognitive, informational approach.

Three variables were manipulated: whether or not subjects were presented with a situational cause for the stimulus person's anxiety level to change (situational cause present vs. situational cause absent), the pattern of change of the stimulus person's anxiety levels (increasing vs. no change vs. decreasing), and whether or not the subjects were directly involved in reducing the stimulus person's anxiety levels (actor vs. observer). It was hypothesized that the stimulus person would be seen as being a more anxious person and more responsible for his behaviors when his anxiety level increased than when it decreased. However, this relationship was predicted to be obtained only in the condition in which the subjects actually attempted to reduce the stimulus person's anxiety; when subjects did not attempt to reduce the stimulus person's anxiety, no differences in attribution were predicted among subjects, regardless of whether they saw the

stimulus person's anxiety level increase, remain unchanged, or decrease. Furthermore, it was predicted that no differences in attributions would be obtained between observer-subjects and actor-subjects, who were directly involved in reducing the stimulus person's anxiety.

One hundred and thirty six undergraduate psychology students served as subjects. They were run in same sex dyads together with a male confederate who posed as a third subject. For half the subjects, they were told that their task was to try to reduce the confederate's anxiety level by administering to him some relaxation procedures that were available to the subjects (Situational Cause Present condition). For the other half of the subjects, they were told to just try out the relaxation procedures without administering them to anyone (Situational Cause Absent condition). In each experimental session, one subject was randomly assigned to be the actor-subject who had to try out the relaxation procedures, while the other subject was assigned to be the observer-subject who only had to observe the actor-subject. Through a light panel that was connected to another room which the confederate was in, all subjects received feedback on whether the confederate's anxiety level increased, remained unchanged, or decreased. Finally, subjects were asked to fill out a questionnaire on their attributions about the confederate (i.e., the stimulus person), the relaxation procedures, and the actor-subject.

It was found that the stimulus person was seen as being a more anxious person when his anxiety level increased than when

it remained unchanged, and when it remained unchanged than when it decreased. However, this was found to be the case in both the Situational Cause Present and Absent conditions. This, in conjunction with the absence of the predicted results for the responsibility measures of the stimulus person and the actor-subjects, did not lend support to the present "cognitive, informational" formulation. The lack of actor-observer differences on all the primary dependent measures also ruled out the possibility of the operation of motivational biases. It appeared that the present results might best be interpreted within the framework of a recency-effect approach.