Subjects in a stress condition were led to believe that they had failed an important achievement test while subjects in a non-stress condition were not led to believe that they had failed. Projection strategies were manipulated by encouraging subjects either to attribute the cause of their poor performance to the examiner instead of to themselves (blame projection) or to estimate how poorly their friends would have scored on the test had they taken it and not performed well on it (similarity projection). Measures of subjective anxiety, anger, and depression indicated that (a) the failure feedback was effective in increasing stress, (b) blame projection was effective in controlling stress, and (c) similarity projection was partially effective in controlling stress. The results provide evidence that blame projection can be effective in controlling stress and also have implications concerning the conditions under which the use of projection will and will not be effective in coping with stress. The importance that situational factors may have on the effectiveness of cognitive coping strategies was emphasized.

(Author)
BLAME PROJECTION, SIMILARITY PROJECTION, 
AND RESPONSE TO FAILURE

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Abstract

Subjects in a stress condition were led to believe that they had failed an important achievement test while subjects in a non-stress condition were not led to believe that they had failed. Projection strategies were manipulated by encouraging subjects either to attribute the cause of their poor performance to the examiner instead of to themselves (blame projection) or to estimate how poorly their friends would have scored on the test had they taken it and not performed well on it (similarity projection). Measures of subjective anxiety, anger, and depression indicated that (a) the failure feedback was effective in increasing stress, (b) blame projection was effective in controlling stress, and (c) similarity projection was partially effective in controlling stress. The results provide evidence that blame projection can be effective in controlling stress and also have implications concerning the conditions under which the use of projection will and will not be effective in coping with stress. The importance that situational factors may have on the effectiveness of cognitive coping strategies was emphasized.

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Blame projection is the process in which a person attributes the cause of his or her feelings, behavior, or personality characteristics onto a nonveridical source outside of himself or herself. This process has been referred to as "complementary" projection within psychoanalytic theory and as "misattribution" within social psychology. It has been hypothesized that because blame projection provides an explanation for the person's feelings, behavior, or personality characteristics, and/or relieves the person of responsibility for them, the use of this projection is effective in reducing stress. In fact, this type of projection is cited as one of the major defense mechanisms by psychoanalytic theorists (cf. Freud, 1956).

The results of the research on the stress-reducing function of blame projection are limited and mixed. The one experiment stemming from the psychoanalytic approach failed to find any evidence that blame projection is an effective strategy for reducing stress (Bloom & Houston, 1975). On the other hand, several experiments generated by attribution theory within social psychology have purported to document the stress-reducing function of blame projection. For example, it has been reported that subjects who attributed the cause of their insomnia to a placebo pill went to sleep faster than when they had no pill on which to project (Storms & Nisbett, 1970), subjects who attributed their arousal to white noise showed faster extinction to a conditioned source of fear (Loftis & Ross, 1974a, 1974b), subjects who attributed their arousal to a gas they were breathing reported feeling less anxiety while viewing a stressful film (Girard, 1973), and subjects who labeled their fear or guilt as drug-induced sympathetic arousal subsequently tolerated higher levels of shock (Nisbett & Schachter, 1966) or cheated more on a college aptitude test (Dienstbier & Hunter, 1971). Unfortunately, however, these studies suffer from methodological problems which make their support for the defensive function of blame projection equivocal (cf. Calvert-Boyanowsky & Leventhal, 1975). For example, most used no manipulation checks to determine whether or not blame projection in fact occurred, many were based entirely on indirect or inferential measures of stress, and several have either failed to replicate (cf. Kellögg & Baron, 1975) or have had their results explained by more convincing and parsimonious alternate hypotheses (cf. Calvert-Boyanowsky & Leventhal, 1975). All in all, the research stemming from attribution theory does not provide a clear or consistent answer.
to the question of whether blame projection reduces stress.

The above review illustrates an obvious but unexplained discrepancy between theory and research: the former suggesting that blame projection will reduce stress but the latter providing only weak or inconclusive evidence that it actually does. Although it is possible that the theoretical orientations suggesting that blame projection will reduce stress are simply in error, an alternate explanation is that the experimental designs employed in previous research have not consistently provided an appropriate context for blame projection to exert a defensive effect. That is, blame projection may be effective in reducing stress only under certain conditions, and to date these conditions have not been experimentally induced. The purpose of the present study is to assess the stress-reducing effectiveness of blame projection in a situational context which hopefully maximizes the likelihood that projection will be effective. On the basis of the varying degrees of reported effectiveness of blame projection in previous research, three situational conditions were deemed advantageous and hence were incorporated into the present experimental design. First, the actual cause of the subject's arousal should be ambiguous and/or diffuse as opposed to clear and/or specific (for example, poor performance on a test versus an electric shock) so that there is ample room for the subject to overlook or distort the actual cause. Second, the source which the subject uses to account for his feelings of arousal should be less aversive than the true source (for example, a person with feelings of failure may project more effectively onto an inept examiner as opposed to a threatening examiner) so that there is a stress-reducing advantage to changing the perceived source of arousal. Third, projection should be used before the subject is highly aroused or distressed because it is probably easier to prevent or short-circuit stress than it is to try to eliminate stress once it has been generated. It is important to note that the present experiment was designed not to directly test the necessity of the conditions described above, but instead to employ them to create optimal conditions under which to investigate blame projection.

In addition to examining the influence of blame projection on stress reduction, attention was also given to the influence of similarity projection in reducing stress. Similarity projection is the process by which an individual attributes to other persons' behaviors or personality characteristics which are similar to his own. For example, a student who fails an important test may find consolation by projecting a similar outcome onto several of his friends, asserting that they they too would have
failed the test had they taken it. Although a substantial amount of research suggests that people do in fact employ similarity projection (cf. Holmes, 1968), relatively few experiments have been carried out to answer the question of whether similarity projection reduces stress, and the work which has been done (Bennett & Holmes, 1975; Holmes & Houston, 1971; Stevens & Reitz, 1970; Zemore & Greenough, Note '1) has produced mixed results, frequently within the same experiment. Again, it may be that previous research has failed to provide the conditions under which projection is most likely to exert a stress-reducing effect. A second purpose of the present experiment was therefore to explore the stress-reducing function of similarity projection under the conditions described above.

In order to provide a relatively ambiguous and therefore easily projectable source of arousal, subjects in the present experiment either were (stress condition) or were not (nonstress condition) given feedback which indicated that they had failed a test of intelligence and college achievement. Before being distressed by this feedback, one third of the subjects were encouraged to blame the examiner for their poor performance (blame projection condition), another third were encouraged to entertain the idea that their friends might perform poorly on such a test (similarity projection condition), and the remaining subjects were not given any instructions regarding blame or similarity projection (no projection condition). The influence of the projection strategies was measured by self-report indices of three specific affects (anxiety, anger, and depression).
Subjects and Design

The subjects in this experiment were 108 female students from introductory psychology classes at the University of Kansas. They were randomly assigned in equal numbers to the six conditions formed by the 2 (stress, nonstress) by 3 (no projection, blame projection, similarity projection) factorial design.

Procedures

When the subject arrived at the laboratory, she was told that the experiment was concerned with the relationship between emotion and performance on cognitive tests, and was then taken to an adjoining room and seated at a table. After the experimenter seated the subject, he informed her that the instructions for the experiment would be given to her via tape recorder. He then left the experimental room and returned to the control room where he started the tape recorder which gave the instructions for each of the six conditions. Except for the specific stress and projection manipulations, the instructions for each of the six conditions were identical. For ease of presentation, therefore, only the stress-no projection condition will be presented in detail, followed by a description of the differences in the procedures between this condition and each of the other five conditions.

Stress-No Projection Condition

The instructions in this condition first asked the subject to relax and then to fill out several forms which consisted of (a) the State Anxiety Inventory (SAI; Spielberger, Gorsuch, & Luschene, 1970), (b) half of the items (randomly selected) from the Hostility Scale of the Multiple Affect Adjective Check List (MAACL; Zuckerman, Lubin, Vogel, & Valérius, 1964), and (c) half of the items (randomly selected) from the Depression Scale of MAACL. The subject's responses to these forms were used as measures of her base level of subjective anxiety, anger, and depression, respectively. After the subject completed these forms, she was given a brief description of the experiment and was asked to sign a Consent Form indicating her agreement to participate in the study. After the subject signed the Consent Form, the instructions explained that:

In this part of the experiment you will be taking a special achievement test which is called the Advanced College Achievement Test. It is an important test because it has been found
to be highly predictive of intelligence and success in upper-level college courses. In a few minutes I am going to ask you to take the test and sign your name to it. My assistant will then score the test for you and show you the results. It will then be put into your Confidential Record and returned to your college office. In the future we will then be able to compare how well you did on the test to how well other students in your class did on the test, and hopefully your results will help your advisors to more accurately estimate your likelihood of future college success.

The experimenter then entered the room and showed each subject a sample item from the Advanced College Achievement Test (actually the Remote Associates Test; Mednick, 1962) to provide her with information concerning the nature of the test. He then provided the subject with a form which asked her to estimate how well she expected to do on the test. After the subject had finished writing her estimate, the experimenter picked up the sheet and returned to the control room where he started the tape recorder. The instructions then informed the subject that she would have 12 minutes to take the test and that she should work as rapidly as she could. The experimenter then entered the room and gave the subject the test. At 5, 4, 2, 1, and ½ minutes before the end of the test the experimenter announced to the subject how much time she had left. When the testing period was completed the experimenter picked up the test and returned to the control room, ostensibly to score the test.

After the experimenter had presumably scored the test, he returned to the experimental room and gave the subject an official-looking form on which was reported her percentile score on the test. For this condition the feedback indicated that she had obtained a percentile score which was 55% of the percentile score she had estimated she would achieve on the test.

The subject was next asked to complete the MAACL to assess her postfeedback level of subjective stress. The MAACL is composed of the Affect Adjective Check List (AAACL), Hostility Affect Check List (HAACL), and Depression Affect Check List (DAACL) and provides state measures of subjective anxiety, anger, and depression, respectively. As with the base level measures, only half of the items (randomly selected) from the AAACL and DAACL were included. After the subject completed the MAACL, the experimenter entered the room and interviewed her concerning her perception of the experiment. The subject was then thoroughly debriefed concerning the nature of the experiment, asked not to discuss the
Stress-Blame Projection Condition

The procedures for the stress-blame projection condition were the same as those in the stress-no projection condition except that immediately before the subject received the negative feedback, the instructions explained that:

Examiners or people who actually administer tests of intelligence and college achievement have been shown to be able to affect how people taking these tests perform. This effect can be either positive or negative, depending on the mood and behavior of the examiner. I am interested in knowing what effect the examiner can have on people's performance on this particular test. Knowing how he can affect your performance will help us determine how important his effect can be and also how to better evaluate your responses.

In order to assess the examiner's effect, the subject was asked to: (a) list all of the things the examiner did "which could have caused you or anyone else to do poorly on the test," (b) rate on scales from 1 to 10 the extent to which the examiner made her feel nervous and anxious, and (c) select from a list of 14 adjectives (taken from the Hostility Scale of the MAACL) those which best described the examiner. These procedures were aimed at encouraging the subject to use causal projection and hence to subsequently attribute her poor performance to the experimenter. After the subject completed the final checklist, the experimenter picked up the sheets and returned to the control room. The procedures then continued exactly as they did in the stress-no projection condition.

Stress-Similarity Projection Condition

The procedures for the stress-similarity projection condition were the same as those in the stress-no projection condition with two exceptions. First, prior to beginning the tape-recorded instructions, the experimenter asked the subject to write down the first names and last initials of three female friends whom the subject knew well. He simply told the subject that these names would be used later in the experiment. Second, immediately after the subject had taken the test but before she had received the negative feedback, the instructions asked the subject to estimate how poorly each of her three friends would have performed on the test if they had taken it and not scored well on it. The subject was told that such information was part of an effort "to get in-
formation about a larger number of people than those who actually take the test." This procedure was aimed at providing the subject with an opportunity to project failure onto her three friends. After the subject made her estimations, the experimenter returned to the experimental room and picked up the sheet. From this point on the instructions were the same as they were in the stress-no projection condition.

Nonstress Conditions

The procedures for the three nonstress conditions (nonstress-no projection, nonstress-blame projection, nonstress-similarity projection) were identical to those in the three corresponding stress conditions (e.g., procedures in the nonstress-no projection condition were identical to those in the stress-no projection condition) except that a subject in a nonstress condition was not told that she was taking an important test nor did she receive any feedback concerning her performance on the test. Instead, each subject in these conditions was initially told that, "We are not interested in how you perform on this test. In fact, we do not want you to sign your name to the test nor will the test ever be graded. We are solely interested in testing out the test." With this exception, procedures in the corresponding stress and nonstress conditions were identical.

Results and Discussion

Subjective anxiety, anger, and depression were measured by the AACL or SAI, HACL, and DACL, respectively, for two periods: the baseline period and the postfeedback period after subjects did or did not receive the negative feedback. In order to rule out the possible influence of basal levels on the magnitude of responses given in later periods (i.e., the "law of initial values"; Lacey, 1956; Wilder, 1962), a base-free measure of change was desirable (Benjamin, 1967; Tucker, Damarin, & Messick, 1966). Therefore "residualized" scores (cf. Cronbach & Furby, 1966) were calculated for the self-report data obtained during the postfeedback period. Each residualized score consisted of the difference between a score obtained during the postfeedback period and the score predicted by linear regression from the respective baseline scores. All subsequent analyses reported on the AACL, HACL, and DACL data were carried out on residualized scores.

Effect of Stress Manipulation

It was predicted that subjects who had been led to believe
that they had done poorly on an important test would report feeling more stress than would subjects who had not been led to believe that they had done poorly. Consistent with this prediction, significant main effects for stress were generated by the 2 (stress) X 3 (projection conditions) analyses of variance performed on the subjective anxiety, anger, and depression data, Fs (1, 102) = 8.88, 6.12, and 7.18, respectively, p < .02 in each case.

Effect of Projection in Controlling Stress

It was predicted that subjects who were given the opportunity to project would evidence less stress than subjects who were not given the opportunity to project. The 2 (stress) X 3 (projection conditions) analyses of variance which were carried out on the AACL, HACL, and DACL scores indicated significant main effects for projection conditions, Fs (2, 102) = 3.28, 4.94, and 5.59, respectively, ps = .042, .009, and .005, but did not indicate significant projection conditions by stress interactions. Planned comparisons were next conducted on the projection condition means and revealed that subjects in the blame projection condition felt significantly less anxiety (X = 13.99), anger (X = 16.61), and depression (X = 6.22) than subjects in the no projection condition (Xs = 15.25, 18.69, and 8.29, respectively), ts (102) = 2.55, 2.69, and 3.19, p < .02 in each case (all t values are two-tailed).

These comparisons indicate that blame projection was an effective strategy for controlling stress. Further planned comparisons involving the similarity projection condition means indicated that although subjects who employed similarity projection reported feeling less anger (X = 16.56) than did no projection subjects, t (102) = 2.75, p < .01, they did not report feeling less anxiety (X = 16.56) or depression (X = 7.82), ts (102) = 1.53 and .73, ns. These results suggest that similarity projection was partially effective in controlling stress, aiding subjects to significantly reduce their feelings of anger but not their feelings of anxiety or depression.

In order to compare the effectiveness of the two projection manipulations, planned comparisons were conducted on the blame projection and similarity projection condition means. These comparisons revealed that blame projection was significantly more effective in controlling subjects' feelings of depression, t (102) = 2.96, p < .02, but that the two strategies did not differ in their effectiveness for controlling subjects' feelings of anxiety and anger, ts (102) = 1.02 and .01, ns. These results indicate that in the present experiment, blame projection was somewhat more effective than was similarity projection in controlling stress. However, it is important to point out that this finding
does not necessarily mean that blame projection is inherently a more effective coping strategy; the results may instead indicate that the blame projection manipulation was stronger than the similarity projection manipulation, or that the experimental conditions were more favorable to the successful use of the blame projection strategy.

Conclusions and Implications

The results of the present experiment clearly and consistently indicated that the use of blame projection prior to the onset of a threat to self-esteem (viz., failing an important test) was effective in controlling stress. These findings give general support to the well-established theoretical positions which have proffered the stress-reducing effectiveness of blame projection, though they do not address the validity of any particular theory.

Perhaps more importantly, the results of the present experiment have interesting implications concerning the conditions under which the use of blame projection will be effective. More specifically, the results suggest that an ambiguous or non-specific veridical source of arousal, a nonveridical source which is less aversive than the veridical source, and the introduction of projection while the individual is at a relatively low level of arousal are sufficient and may be necessary conditions for the successful use of blame projection. The theoretical explanations as to why these factors may be important, however, are at this point untested and must await further experimentation. The need for such experimentation seems great because of the unfortunate lack of data concerning the situational contexts in which various coping strategies are most likely to be effective. This deficit seems surprising in view of the large body of research in the general personality area which consistently underscores the importance of situational factors (e.g., Mischel, 1969).

The results regarding similarity projection were less strong than those regarding blame projection. Specifically, similarity projection was found to be partially effective in reducing stress, controlling feelings of anger but not feelings of anxiety or depression. The reason for this inconsistency in the effectiveness of similarity projection is not clear, though it is interesting to note that previous research (Bennett & Holmes, 1975) has also reported inconsistent results concerning similarity projection's effectiveness in reducing stress. It is possible that the situational factors which are necessary for the effective use of similarity projection are different from those which are necessary for
the effective use of blame projection and which were provided in the present experiment. More research is obviously needed to answer the questions of whether and when similarity projection may be effective in controlling stress.
Reference Note

References


It might be noted that physiological indices (pulse rate and finger pulse volume) were also obtained during this experiment but they were not found to be sensitive to the stress manipulation. A review of the literature indicated, however, that these findings were consistent with previous research indicating that complex emotional states involving depression, such as generated here, may not be associated with increases in autonomic arousal (Gatchel & Proctor, 1976; Sternbach, 1961). In view of these other results, the fact that the physiological indices were not sensitive should not be a matter of concern.