

INTERNAL-EXTERNAL ATTRIBUTIONS
AND LEARNED HELPLESSNESS AMONG LOWER
AND MIDDLE CLASS ADULTS

by

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Thesis submitted to the Faculty of the
Virginia Polytechnic Institute and State
University in partial fulfillment of the
requirements for the degree of

Master of Science

in

Psychology

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June, 1982
Blacksburg, Virginia

Acknowledgements

I would like to thank those who made this project possible.

Sincere appreciation is extended to Chris Peterson, for his advice, patience, and encouragement throughout the preparation of this report. Additionally, I would like to thank Albert Prestrude and George Clum for being part of the Examining Committee.

Considerable gratitude is expressed to the Black female undergraduates at Virginia Polytechnic Institute and State University. Without the volunteering of their time, this project could not have been accomplished.

Finally, but most importantly, I would like to thank my family: my mother who has taught me strength; my father who has taught me to give meaning to struggle; my sisters, brother, and nephew who have pride in me; my grandmother and aunt who have taught me "to dare"; and who has perennial faith--I extend a gratitude that only silence can convey.

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Introduction

Original Learned Helplessness Theory

According to the original learned helplessness hypothesis (Seligman, 1975), when organisms are exposed to aversive uncontrollable events (i.e., when the probability of the outcome given a response is equal to the probability of the outcome given no response), three deficits typically ensue: motivational, cognitive, and emotional. The theory maintains that mere exposure to uncontrollability does not result in helplessness but rather that the crucial variable is the organism's expectancy concerning the uncontrollability of future outcomes. By definition, the motivational component of helplessness refers to the retarded initiation of voluntary response and is considered the most salient effect of exposure to uncontrollability. This deficit was first observed in studies with dogs (Overmier, 1968; Overmier & Seligman, 1967; Seligman & Maier, 1967; Seligman, Maier, & Geer, 1968). Specifically, these studies showed that mongrels, after trials of unsignalled inescapable electric shocks, failed to initiate escape attempts on a subsequent shuttle box task. Further, these studies suggested that the motivation to respond is undermined regardless of parameters such as frequency, intensity, duration, and the temporal pattern of shock.

Similar debilitating effects of exposure to uncon-

trollability have been found in studies with cats (Masserman, 1971), fish (Padilla, 1973) and rats (Seligman, Rosellini, & Kozak, 1975; Testa, Juraska, & Maier, 1974). Moreover, there has been a proliferation of studies examining motivational deficits in humans following uncontrollability (Fosco & Geer, 1971; Hiroto & Seligman, 1975; Miller & Seligman, 1975; Roth & Bootzin, 1974; Roth & Kubal, 1975; Thornton & Jacobs, 1971; among others). In a representative study, Hiroto (1974) produced motivational debilitation in human subjects. Using a three group design, Hiroto (1974) allowed one group of subjects to escape a loud noise by button pressing while exposing the second and third groups to inescapable noise and no noise, respectively. The test task (which was the same for all groups) was a hand shuttle box. Like the results of the forementioned animal studies, subjects given inescapable noise failed to escape and passively endured subsequent noise. The motivational deficit of learned helplessness has been shown in other studies as well (Fosco & Geer, 1971; Glass & Singer, 1972; Hiroto & Seligman, 1975). In general, the studies indicate that exposure to uncontrollability produces decrements in the readiness to respond actively to trauma in a variety of species (Maier & Seligman, 1976).

In addition to a retarded initiation to respond, cognitive deficits have also been observed as a consequence

of exposure to uncontrollability. These deficits have been defined as an interference in learning that later responses can effect an outcome, even when responding is actually successful. This interference in the perception of control has also been demonstrated in various studies. For example, Hiroto and Seligman (1975) had three groups of students receive inescapable, escapable, and no noise, respectively. All were then tested at an anagram task. Results showed that inescapable noise interfered with the ability to solve subsequent anagrams. Miller and Seligman (1975) and Klein, Fencil-Morse, and Seligman (1976) reported similar results.

Finally, the transience of the motivation deficit led to the positing of an emotional component of learned helplessness. Overmier and Seligman (1967), for example, found that dogs given one session of inescapable shock were helpless 24 hours later, but that this helplessness was not evident on test given 48, 72, or 162 hours after inescapable shock. The emotional consequence of uncontrollability has been observed in studies with rats (Desiderato & Newman, 1971; Mowrer & Vick, 1948; Weiss, 1968). For example, Weiss (1968) found that rats exposed to escapable shock showed fewer and less severe ulcers than rats exposed to inescapable shock. Additionally, the latter group lost more weight, defecated more, and drank less than their counterparts. Hokanson, DeGood, Forrest, and Brittain (1971) also provided evidence

for an emotional reaction to uncontrollability. Specifically, they found that in humans, exposure to shock during a symbol matching task resulted in higher blood pressure for subjects not given time-out from shock than for those given any number of time outs that they desired. Hearst (1965), Desiderato and Newman (1971) and Payne (1972) have corroborated these results.

In summary, then, the learned helplessness theory proposes that three types of deficits result from exposure to aversive uncontrollable stimuli: motivational, cognitive, and emotional. Mediating these deficits is the expectation that future stimuli are uncontrollable.

Application of the Learned Helplessness Theory

Since its introduction 15 years ago, various investigations have been conducted demonstrating the applicability of the learned helplessness theory to such phenomena as psychosomatic complaints (Pennebaker, Burnam, Schaeffer, & Harper, 1977), delay of gratification (Lesure, 1978) drug use (Berglas & Jones, 1978) and the effects of poverty (Bresnahan & Blum, 1971). Perhaps the most prolific investigations have been conducted in the area of psychopathology, where learned helplessness has been proposed as a model of reactive depression (Miller & Seligman, 1973, 1975).

Helplessness seems to do a good job in describing the failure of adaptation that depression represents. The

symptoms of depression are attributed to the expectancy of response-outcome noncontingency. Thus, the retarded initiation to respond is purported to parallel the passivity, psychomotor retardation, and social impairment of depressives, while the cognitive deficits are considered to parallel their cognitive impairment. Finally, the theory points to a similarity between the negative affect associated with laboratory helplessness and the dysphoria of naturally-occurring depressive mood.

The learned helplessness theory has also been employed as an explanation of coronary proneness. Glass and Carver (1980), for example, suggested that the effects of uncontrollability on coronary proclivity is mediated by a Type A behavior pattern. Specifically, they proposed that the cyclical action of the effort to exert control followed by giving up is paralleled by an increase and decrease of nonadrenaline, respectively. Because the literature (Raab, Chaplin, & Bajusz, 1964; Raab, Stark, MacMillian & Giguee, 1961) suggests a causal relationship between nonadrenaline and coronary disease, those authors maintain that the frequency of this cycle is crucial in determining the occurrence of this pathology.

Finally, Dweck and her associates have done extensive research demonstrating the applicability of the learned helplessness model to difficulties in school (Diener & Dweck, 1978; Dweck & Gillard, 1975; Dweck, Goetz & Strauss,

in press; Dweck & Reppucci, 1973). For example, Dweck and her colleagues have found that failure experience can either facilitate or debilitate achievement. Responses to failure appear mediated by two major types of cognitions about achievement: those resulting in a learned helplessness orientation versus those resulting in a mastery orientation. In other words, if an individual thinks that failure is inevitable, that there is no relationship between responses and outcomes, then failure will disrupt future achievement. In contrast, if an individual thinks that failure is not inevitable, that responses and outcomes are associated, then failure need not disrupt later achievement. Indeed, failure might facilitate the subsequent achievement behavior of mastery-oriented individuals.

Various empirical investigations have supported these ideas. The research most pertinent to the present concerns has focused on the attributions made by children for their failure experiences. Dweck (1975) and Dweck & Reppucci (1973) found that children who attributed failure to stable factors such as ability evidenced a decrement in problem-solving performance following failure, relative to children who attributed failure to less stable factors such as effort. Further, Dweck (1975) showed that the performance deficits of helpless children could be reversed when they were taught to attribute their failure to a lack of effort rather than to a lack of ability.

In addition, Diener and Dweck (1978) reported several studies that directly assessed attributions during the course of problem-solving by asking children to talk out loud while working on problems. In this way, the role of attributions in facilitation versus debilitation could be investigated. As in previous research, these children were divided into helplessness-oriented and mastery-oriented groups, based on their responses to an attributional questionnaire. Children were initially given solvable problems, and then insolvable problems.

The groups did not differ in their verbalizations during the solvable problems, but marked differences emerged during the unsolvable problems. Specifically, helplessness-oriented children began to attribute failure to lack of ability, to evaluate the task negatively, and to express a desire to discontinue their participation. These children also began to show less effective strategies of problem solving, documenting the close link between attributions and achievement debilitation. Conversely, master-oriented children attributed their failure to insufficient effort and maintained effective problem-solving strategies. These children spoke of the problems as challenging and therefore enjoyable, showing none of the disruption and negative affect of the helpless children.

Dweck and her associates have gone on to explain sex differences in achievement in terms of master-versus-helpless-

ness orientation. Little boys are encouraged by their classroom teachers to attribute failure to lack of effort, while little girls are encouraged to view failure as due to lack of ability. As these attributional styles become internalized, females become more likely than males to be disrupted by failure.

Similarly, it is also possible to view middle-versus-lower socio-economic class differences in achievement, and White-versus-Black differences, as resulting from differences in achievement cognitions. To the degree that lower class individuals and Black individuals view failure as resulting from stable causes (e.g., lack of ability), they will be more debilitated by its occurrence. It seems plausible to make this assumption, although pertinent data are scarce. A study recently reported by Smith (1979) does support this possibility. She gave middle class and lower class children, both Black and White, solvable and unsolvable problems. All children were then given solvable problems. Although all children evidenced problem-solving deficits following failure, these deficits were most pronounced for the lower class children and for the Black children. Lacking in Smith's (1979) study was assessment of the attributional cognitions presumably mediating the effects.

The Reformulation of the Learned Helplessness Theory

Although generally supported by infrahuman research,

the examination of human helplessness posed a particular problem for the original theory. Two primary inadequacies existed: (a) the theory did not distinguish between cases where an event/outcome was perceived as uncontrollable just for oneself and cases where an event/outcome was perceived as uncontrollable for oneself as well as significant others; and (b) it did not explain when the helplessness deficits would be general or specific or when they would be acute or chronic.

An evaluation of these inadequacies resulted in a reformulation of the theory on the basis of a revised attributional theory. According to the reformulation, when people are exposed to uncontrollable events, they ask "why" they are helpless (Abramson, Seligman & Teasdale, 1978). The attributions they make may be made along three orthogonal dimensions: internal-external, stable-unstable, and global-specific. By definition, internal attributions are made when an individual believes that outcomes are more likely or less likely to happen to the self than to significant others; conversely, individuals make external attributions for outcomes that they believe are as likely to happen to themselves as to relevant others (Abramson et al., 1978). Stable attributions refer to factors that are recurrent or persist over time, while unstable attribution refers to factors that are transient. Finally, global attributions refer to factors that are pervasive across situations; specific attributions

point to "cause" unique to the helplessness situation.

Theoretically, the particular type of attribution influences the individual's expectation of future helplessness. That is, it will determine whether the deficits will extend over time or not (stable-unstable) or be evident in dissimilar situations (global-specific). Additionally, the internal-external attribution will determine if the level of self-esteem is affected. Thus, while the generality and chronicity of helplessness is determined by the global-specific and stable-unstable dimensions, respectively, the internal-external attribution will mediate the effect of uncontrollability on self-esteem. Since the present study investigates the role of the internal-external (I-E) attribution dimension, further explanation follows.

The attribution dimension of internality was employed in the attempt to resolve the first inadequacy of the original learned helplessness theory. As previously indicated, this inadequacy does not distinguish between events that are perceived as uncontrollable for oneself alone vs. events that are seen as uncontrollable for oneself as well as significant others. Within the context of the reformulation, this distinction resulted in a description of two types of helplessness -- universal vs. personal.

Abramson et al. (1978) used the self-other dichotomy in their explanation of universal and personal helplessness. Specifically, they proposed that when people believe out-

comes to be response-noncontingent for themselves as well as for significant others, they make external attributions for this uncontrollability, resulting in universal helplessness. Conversely, personal helplessness results when internal attributions are made for events perceived as uncontrollable for that individual alone. Personal helplessness involves self-esteem loss, while universal helplessness does not.

Abramson (1977) conducted the first study examining the validity of the reformulation's distinction between universal and personal helplessness. Specifically, she investigated the effects of the I-E attribution for uncontrollability on students' moods, self-esteem, and expectancy of future success on an instrumental task. In her experiment, 60 nondepressed college students were randomly assigned to one of five experimental groups. Three groups comprised the triadic design typically employed in learned helplessness studies. One group received an uncontrollable noise (T-H), a second group was exposed to a controllable noise (C), while a third group received no stimuli. The last two groups also received uncontrollable noise, but were differentiated on the basis of an attribution instruction. One group was instructed to attribute their lack of control to ability (personal helplessness - P-H) and the second group was instructed to attribute their lack of control to task

ambiguity (universal helplessness - U-H).

Abramson (1977) proposed three hypotheses based on the reformulation. These were: (a) subjects in the typical (TH), universal (UH), and personal helplessness (PH) groups would exhibit greater depressed affect than subjects in the controllable and no-noise groups. Further, personally helpless subjects should show greater depressed affect relative to the universally helpless subjects; (b) personally helpless subjects would show a decrement in self-esteem following exposure to uncontrollability, while the universally helpless subjects as well as subjects experiencing controllability and no treatment would not; and (c) those in the personal, universal and typical helplessness groups would predict poorer performance for themselves (lowered expectancy for success) on the subsequent instrumental task relative to the other groups.

The results confirmed the first hypothesis. That is, subjects in the T-H, P-H, and U-H groups all showed mood changes in the direction of increased depression compared to subjects in the controllable noise group. Subjects in the T-H and P-H groups also became more depressed than subjects who did not receive the experimental stimulus. Subjects in the U-H group showed a trend to become more depressed than subjects in the no noise group. Finally, although group means were in the predicted direction, P-H subjects did not become significantly more depressed than

U-H subjects.

With regard to self-esteem changes, the results showed that both T-H and P-H helplessness groups suffered losses in self-esteem, with subjects in the personally helplessness group showing a worsening of self-esteem relative to the U-H group, controlled noise group, and no-noise group. Finally, analysis of the expectancy of success ratings showed that subjects in all three helplessness groups expected to do more poorly on the instrumental tasks than subjects in the no noise or controllable group.

Thus, the results of this experiment supported the reformulated model of human helplessness. In summary, it demonstrated that although personal helplessness was not associated with a greater increase of depression than was universal helplessness, all helpless subjects depressed following exposure to uncontrollable noise. Additionally, it was shown that personal helplessness resulted in lowered self-esteem while this was not demonstrated with the universally helpless subjects. The finding that subjects exposed to uncontrollable noise during the first phase of the experiment believed they would do poorly on a second task supports a basic assertion of the helplessness model: that cognitions of no control formed about one task generalize to another (Abramson, 1977). Lacking in Abramson's (1977) study, however, was the assessment of the subjects' performance on a helplessness test task.

The Present Study

The present study is an attempt to extend the work of Dweck (1975), Smith (1979), and Abramson (1977) by applying the reformulated helplessness model to the issue of class differences in achievement. Adult subjects from the middle-versus-lower class were given solvable or unsolvable problems. Two questions were addressed: (a) are lower class individuals more disrupted following failure? and (b) is this disruption mediated by attributions? More specifically, is an attribution of failure to internal causes associated with the most disruption, including loss of self-esteem following failure?

The following design was employed. Fifty lower and middle socio-economic class Black female subjects were randomly assigned to five different experimental conditions. In three of these conditions, subjects were given unsolvable Levine (1971) concept-identification problems. In one unsolvable condition ($\underline{n} = 10$), subjects were instructed to attribute their failure internally. In a second unsolvable condition ($\underline{n} = 10$), subjects were instructed to attribute their failure externally. In the third condition ($\underline{n} = 10$), subjects were given no explicit attributional instruction. In the fourth experimental condition ($\underline{n} = 10$), the concept-identification problems were solvable. Finally, in the last condition ($\underline{n} = 10$), subjects were asked to look at the concept-identification problems without attempting to solve them.

Subjects in all groups were then tested with the same anagram task, as well as with Rubick's Cube (making one side of the block into a solid color). In order to assess self-esteem and mood, all subjects completed the Rosenberg (1965) Self-Esteem Questionnaire and Lubin's (1967) DACL prior to pretreatment and, again, following the test phase. Subjects given the pretreatment problems completed an attribution questionnaire in order to assess their perceptions about causes for performance on the pretreatment task.

Subjects were divided into lower and middle class by the use of a demographic questionnaire using the head of the household's income, education, and occupation as the criteria.

In Appendix G are described the experimental groups, the abbreviations of their names, and the number of subjects in each. Also in Appendix G are the dependent measures employed. Based on the predictions made by the reformulation model, the following hypotheses were offered:

- 1) The IA, EA, and NAF groups would perform worse on the anagram test than the no Tx and NAS groups.
- 2) The IA group would perform worse on the anagram test than the pooled NA & EA groups.
- 3) There would be no significant difference between the EA & NA groups on the anagram test.
- 4) The IA, EA and NAF groups would show greater depressed affect than the NAS and no Tx groups.

- 5) The IA group would show a decrement in self-esteem relative to the EA group on post self-esteem measures.
- 6) Lower class subjects would perform worse on the anagram test than their middle-class counterparts.
- 7) Lower class subjects would perform particularly poorly following uncontrollability and show greater self-esteem loss.

Method

Subjects

The original subject pool consisted of all Black Virginia Tech undergraduate students as listed in a directory compiled by the Black Students Union. Fifty-eight female subjects were contacted by phone and asked to volunteer for a study on the relationship between psychological characteristics and the process of problem solving. Of the original 58, 5 refused to participate in the study, while another 3 did not participate because of scheduling difficulties. Subjects were assigned to lower or middle class on the basis of a questionnaire (Appendix B) developed by the experimenter using the male head of the household's income, education, occupation as criteria. Where there was no male head of the household, the female head of household was used. Subjects circling 1, 2 or 3 to items 4, 5, and 6 were considered middle class, while subjects circling 4 or below to those items were considered lower class. (These cutoffs were created after the subjects were run, to insure equal numbers in the lower-versus-middle class groups.) The final sample consisted of 25 middle class and 25 lower class females between the ages of 18 and 23. The subjects were randomly assigned to one of five experimental conditions, 10 subjects per group (5 middle class, 5 lower class):

Treatment Task

The apparatus and procedure for the Levine set task (Levine, 1971) were identical to those used by Hiroto and Seligman (1975). Briefly, the Levine set task was a series of 60 two-dimensional stimulus patterns contained on projected slides. On each of the 60 slides, the two dimensions had two associated values: (a) shape (triangle or circle) (b) line position (above or below). There were four sets of problems in all, with each problem consisting of 15 trials. Subjects in the helpless groups were led to believe that they could determine which of the 2 dimensions was correct. For each slide they were to make a choice of which of the two slides contained the correct value. Although subjects believed that they were receiving contingent feedback from the experimenter that would help them ascertain the correct value, the experimenter actually gave a noncontingent (50% correct and 50% incorrect) schedule of reinforcement in which the last response for any problem was incorrect. Subjects in the success group received contingent feedback, and indeed all learned the rule.

Instructions

Subjects in the Internal Attribution (personally helpless) group were informed that their performance on the problem solving task was due to their ability.

"Listen to these instructions carefully because

I can't give you any additional information other than what I'm about to tell you now. However, if there are any questions at the end of the experiment, I will try to answer them. You will now perform a problem-solving task. You will receive several trials of two, 2-dimensional stimulus patterns and it is up to you to figure out which of the pattern dimensions is correct. Altogether there will be 60 trials in the problem. That is, there will be 4 sets of problems with each set consisting of 15 trials. You are to respond by stating which of 2 sides contains the correct value. . . . Now for your information, past studies of this type of problem have shown that not everyone can figure out the solution. It turns out that for most students the solution comes relatively easily with the 60 trials allotted and they do solve the problem. But a few subjects just can't solve it. They just don't seem to be able to figure it out. In fact, there are data from previous studies that show that those few subjects who are unable to solve the problem within 60 trials never did solve it even if they were given up to 200 trials. So, in the problem, finding the correct stimulus dimension is mainly a matter of your either having the ability or not having it."

Subjects in the universal helplessness group were informed that their performance was not ability related.

"Listen to these instructions carefully because I can't give you any additional information other than what I'm about to tell you now. However, if you have any questions on what I actually do say, you may feel free to ask. . . . You will now perform a problem solving task. You will receive several trials of two 2-dimensional stimulus patterns and it is up to you to guess which pattern dimension is correct. Altogether, there will be 60 trials in the problems with each set consisting of 15 trials. You are to respond by stating which of the 2 slides contains the correct value.

Since this is a guessing game, there is no consistent response which either you or anyone else could make which will always be correct. In other words, the correct response varies from trial to trial. So guessing the correct response in this experiment is simply a matter of chance and has nothing to do with your personal abilities. Therefore, if you are a lucky guesser, you may come up with the correct response."

Subjects in the No Attribution Failure and No Attribution Success groups were given no attribution for their performance.

"Listen to these instructions carefully because I can't give you any additional information other than what I'm about to tell you now. However, if you have any questions on what I actually do say, you may feel free to ask. . . . You will now perform a problem solving task. You will receive several trials of two 2-dimensional stimulus patterns and it is up to you to guess which pattern dimension is correct. Altogether there will be 60 trials in the problem. That is, there will be 4 sets of problems with each set consisting of 15 trials. You are to respond by stating which of the 2 sides contains the correct value."

Subjects in the No Treatment group were instructed to simply respond which of the dimensions was most salient.

"You will receive several trials of two 2-dimensional stimulus patterns. I would like you to tell me which of the dimensions is most salient, i.e., is most outstanding to you. Altogether there will be 60 trials in this task."

Anagrams

A series of 20 solvable anagrams from Hiroto and Seligman (1975) were used. The anagrams were printed individually on 6 x 4 inch index cards and consisted of five letters in a 5-3-1-2-4 sequence.

The following instructions were given:

"Now you will work on an anagram task. This task is representative of the verbal task given in psychology experiments and also a task that allows me to understand how people work on problems of a verbal nature. As you know, anagrams are words with the letters scrambled. The problem for you is to unscramble the letters so they form a word. Now (subject's name), there could be a pattern or principle by which to solve the anagrams. But it is up to you to figure it out. I can't answer any questions now. After the experiment, I will try to answer any questions you may have."

Subjects were given 100 sec. per anagram. If they did not solve within this limit a latency of 100 sec. was recorded. Trials to a criterion were defined as 3 consecutive trials solved within 15 seconds.

Before the concept-identification test and following the anagram task, subjects completed Lubin's Depression Abjective Check List and Rosenberg's self-esteem scale.

"Please fill out these questionnaires again. For both, you should fill it out according to the way you are feeling right now. Thus, if you are feeling differently than the way you felt the first time you filled it out, you should answer according to how you feel now, regardless of what you put before. But it is okay to put answers similar to the ones you put earlier if you feel the same. Do you have any questions? I will return in about 5 minutes."

Questionnaire Descriptions

Rosenberg Self-Esteem Questionnaire. This is a ten-item scale intended to provide a unidimensional measure of global self-esteem (Rosenberg, 1965; Wylie, 1974). Subjects were instructed to indicate their degree of agreement with

each of ten statements, providing a numerical measure of level of self-esteem. Despite the brevity of this scale, data from reliability and validity studies offer strong support for its utility. For example Silber and Tisbett (1965) reported a test-retest correlation over two weeks of .85. Further, Rosenberg (1965) reported that low scores on this scale are significantly associated with independent measures of disappointment, depressive affect, and poor self-opinion.

Lubin's DACL. The DACL (Lubin; 1967) was designed to provide a measure of transient "state" depression and has been used extensively in the literature. Subjects were presented with a list of 32 adjectives and were instructed to indicate (by checking) those adjectives which describe their current feelings. A total score was calculated by summing the number of keyed adjectives endorsed. For college students, reliability data show the scale to have high internal reliability: $\alpha = .92$.

The Attribution Questionnaire. The attribution questionnaire was a paper and pencil instrument designed to provide a measure of subjects' perceptions of causality for performance on the test task along three bipolar attribution dimensions: internal-external, global-specific and stable-unstable. Each of the bipolar factors are placed at opposite ends of a 7-point rating scale where subjects indicate their response by circling a response ranging from 1 (totally)

external, unstable, or specific) to 7 (internal, stable, or global). Additionally, subjects were requested to answer two other questions in a similar manner: "How important was it for you to perform well on the task?" and "How anxious did you feel after doing this task?" Data from validity and reliability studies offer strong support for the utility of these procedure to assess attributions (Peterson & Seligman, 1981).

Procedure

Upon arrival, the subjects were met by the experimenter (a Black female) and escorted to a small undecorated room where they were individually tested. Each subject read and signed a consent form (Appendix A). In order to assess socio-economic status, subjects were administered a demographic questionnaire (Appendix B) and then assigned to one of the five experimental conditions. The experimenter then left the room while subjects completed the Rosenberg's Self-Esteem Scale (Appendix C) and Lubin's Depression Adjective Check List (DACL) (Appendix D). Upon her return, the experimenter read the attributional instructions to each subject based upon her assigned experimental condition. Subjects were then administered the Levine Set Task. After completing this task, all groups (except the No Treatment group) were given the attributional questionnaire (Appendix E) in order to assess their attribution for failure on this task. Subjects then performed the anagram task and, after

completion, were readministered the Rosenberg Self-Esteem Scale and the Lubin's DACL. Finally, the subject's motivation was assessed by asking her to attempt to solve the Rubick's cube by making at least one side a solid color. The subjects were given 15 minutes to accomplish this task. After this time, she was asked if she wanted to continue. All subjects were then debriefed (Appendix F) as to the purpose of the experiment.

Results

Overall, the predictions were not supported by the data obtained. For the most part, differences among the groups were not apparent for any of the dependent variables: anagram performance, self-esteem, mood, attributions, and persistence at the Rubick's cube.

Anagram Performance

In Appendix H are the mean performance data for the various groups: number correct, average time to solution, and trials to criterion on the anagram task (or 3 consecutive solutions in less than 15 seconds each.) A 5 x 2 between-subjects Anova, with the factors treatment and class, revealed no significant main effects for the three measures. However, there was a significant interaction between class and condition for trials to criterion $F(4, 40) = 3.21, p .05$. The pattern was not interpretable; in light of the large number of nonsignificant effects, this single significant finding is not accorded much weight.

Self-Esteem and Mood

In Appendix I are presented the pre- and post scores for the Rosenberg self esteem scale and The Depression Adjective Check List (DACL) mood scale for the different groups. A

5 x 2 between-subjects Anova (see above) on change scores revealed no main effects nor interactions for these measures, Fs 1. When initial scores (pre-self-esteem and pre-mood, respectively) were used as covariates in these analyses, nonsignificant effects were still obtained.

Attributions

Average ratings for the groups completing the Attribution measures are found in Appendix J. For each of the five ratings, a 4 x 2 (the No Tx group did not complete the questionnaire) between-subjects Anova revealed no main effects or interactions.

Persistence

In Appendix K are the mean scores for the different groups for their persistence at the Rubick's Cube Task. Neither amount of time spent on the cube nor willingness to continue after 15 minutes (1 = discontinue, 2 = continue) discriminated among the groups.

Discussion

The major goal of this study was to test Abramson et al.s (1978) hypothesis that subjects' attributions for uncontrollable events mediate subsequent performance deficits. A second goal was to see if vulnerability to helplessness was more pronounced among lower versus middle class subjects. Specifically, are lower and middle class subjects differentially affected by exposure to an insolvable task, and are any differences obtained mediated by experimentally induced attributions? According to the helplessness reformulation, subjects instructed to attribute their failure to internal factors should exhibit both performance and self-esteem deficits, while subjects instructed to make external attributions should exhibit the performance deficits only. Further, it was hypothesized that lower-class subjects would be more disrupted by the helplessness training task than their middle-class counterparts. However, the actual results did not support the hypotheses. For the most part, the dependent variables failed to show any differences among the groups.

Several conjectures can be offered for the non-significant results obtained. One explanation may be that the subject's attribution ratings do not adequately assess their causal beliefs about the controllable events. Although plausible, this explanation is mitigated by the fact that

similar measures have been successfully used in other research (e.g., Peterson & Seligman, 1981). Thus, if attributional differences were induced they should have been tapped by the questionnaire. However, the results indicate that there were no attributional differences among the groups.

Similarly, the training and test task may not have been potent enough to induce or assess the effects of uncontrollability, respectively. While some studies have questioned the use of the Levine set task and anagrams in helplessness research (e.g. Peterson, 1980; Price, Tyron, & Raps, 1978), other investigations suggest that these task are viable instruments for helplessness training and testing (e.g., Hiroto & Seligman, 1975). Again, if the helplessness deficits did occur those should have been evidenced on the anagram task.

An additional explanation of the nonsignificant results is that the subjects did not accurately perceive the non-contingency in the Levine-set task. This conjecture receives anecdotal support in that after subjects were told that they had failed the task, several indicated that they were not aware that they had failed. Additionally, Peterson (1980) has empirically demonstrated that subjects are generally insensitive to the recognition of non-contingency in analogue studies of this type.

Further, Fischhoff (1976), Langer (1977), and Ross (1977) have shown people to be deficient in certain information-

processing skills, particularly in the ability to recognize non-contingent relationships. Thus the lack of performance differences across groups may have been a result of the subjects' inability to recognize failure. According to the reformulation, subjects' expectation (learning) of non-contingency is critical for the occurrence of helplessness deficits. However, because subjects in the present experiment may not have recognized non-contingency, the manipulated attributions were irrelevant, and thus, the deficits did not occur.

The present results may also be explained within the context of Roth's (1980) revision of the learned helplessness theory--which is similar to that of Abramson et al. (1978) except that variables in addition to attributions are deemed important. According to her revised model, helplessness deficits are mediated by several variables which influence reaction to exposure to noncontingent reward or punishment. Among these are the amount of exposure, the importance of outcomes, and the threat of loss of control for the subject. The more the exposure, the more important the outcome, and the greater the threat value of loss of control, the more likely non-contingent exposure is to result in helplessness deficits. It is possible that the training task was not of sufficient duration to induce helplessness. Further, review of the attribution questionnaire suggests that the subjects did not consider the task as

particularly important and therefore, this perception may have mitigated the threat value of the loss of control. Succintly, then, the helplessness deficits may not have occurred because the necessary and sufficient moderating variables were not present.

The subject's prior expectancy regarding her ability to control outcomes either generally or in a particular situation is another plausible explanation of the present results. The subjects were Black college females who, based on their undergraduate school attendance, have experienced control (succeeded) in an area of particular importance to Blacks, namely academic achievement. Given that the education of Blacks in America is a matter of grave concern (i.e. the difficulty of obtaining quality education), these particular subjects' history of academic accomplishments may have immunized them against the debilitating effects of exposure to a simple manipulation of noncontingency in an experiment. One implication of this is that Blacks can use academic accomplishments as a means of gaining a sense of control in a nation in which they often have been helpless.

Similarly, the attributions made by the subjects, regardless of the manipulated (induced) attribution, may have worked against the helplessness effect. That is, subjects tended to attribute their failure to external causes despite the attempted induction of an internal attribution. Review

of the focus of control literature (e.g., Gurin, Gurin, Lao, & Beattie, 1969) suggest that in certain situations it is intropunitive for Blacks to take personal responsibility for uncontrollability which, given both the quantity and quality of failure experienced among Blacks, would have a detrimental effect on self-esteem. Thus, the subjects in the present experiment reacted in a healthy manner by indicating that their failure experience was due to the task difficulty or vagueness rather than their inability to succeed.

Finally, the fact that the experimenter was a Black female may have influenced the results. The original intention was to equate the race and gender of the experimenter and the subjects, to avoid artifacts resulting from differences, but this may have backfired in practice. Roth (1980) suggested that motivation toward the task will determine facilitation or helplessness following uncontrollability. It is speculated that subjects may have been particularly motivated by the presence of the Black experimenter, and that this motivation equalized performance among the groups. This explanation is viable given the evidence that White experimenters may have detrimental effects on the accomplishments of Blacks in studies investigating, for example, I.Q. (Terrell, Terrell, & Taylor, 1981).

A follow-up to the present experiment should involve the following modifications: 1) replication of the experiment

using a larger number of subjects per experimental condition; 2) the employment of White comparison groups; 3) replication of the experiment using Black male and female subjects in order to ascertain if they are differentially affected by helplessness exposure; 4) the use of a stronger method of attribution manipulation (e.g., have confederates offer attributions to the subject); and 5) the use of a task of greater significance to the subjects (e.g., describe the tasks as predictive of future academic success).

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APPENDICES

APPENDIX A

CONSENT FORM

This study is an investigation of the relationship between personality characteristics and the process of problem solving. You will be asked to perform two cognitive tasks. Additionally, you will be asked to fill out three questionnaire, one concerning your performance on one of the cognitive tasks. It is possible that the procedure may have a negative effect on your mood. However, it is possible that it will not effect your mood at all. All information obtained from you will be kept confidential and will be used only for the purposes of this study. Thus, your identity, performance and answers to the questionnaires will not be disclosed. The experimenter will try to answer any questions you have about the procedure at the end of the experiment.

"I have read the above and I am aware that my participation in this study is voluntary. I understand that, if at any time during this procedure, I wish to discontinue my participation I may do so without penalty. Further, the experimenter has informed me that all information obtained during this procedure will remain confidential."

Signature

Date

APPENDIX B

Name _____

ID # _____

Demographic Questionnaire

Please answer each of the following questions by either circling the most appropriate alternative or by writing your answer in the space provided. Thank you for your cooperation.

1. Which of the following best describes the marital status of the parent(s) you most recently lived with?
 1. Married living together - never divorced or widowed.
 2. Married but separated.
 3. Divorced or widowed Mother, now remarried.
 4. Divorced or widowed Father, now remarried.
 5. Divorced or widowed Mother, not remarried.
 6. Divorced or widowed Father, not remarried.
2. What is your mother's occupation? If retired or unemployed what type of work did she do? _____

3. What is your father's occupation? If retired or unemployed what type of work did he do? _____

4. Which of the following best describes the highest level of schooling your mother completed?
 1. Graduate professional training.
 2. College graduate.
 3. Partial college training (completed at least one year of college).
 4. High School Graduate.
 5. Partial high school graduate (completed tenth or eleventh grade).

6. Junior high school (completed seventh through ninth grade).
 7. Less than seven years of school
5. Which of the following best describes the highest level of schooling your father completed?
1. Graduate professional training.
 2. College graduate.
 3. Partial college training (completed at least one year of college).
 4. High School Graduate.
 5. Partial high school graduate (completed tenth or eleventh grade).
 6. Junior high school (completed seventh through ninth grade).
 7. Less than seven years of school.
6. Which of the following best describes your total family household income for the past year (i.e., 1980)? If you are not sure, please give your best estimate.
1. 20,000 or above
 2. 19,000 - 20,000
 3. 17,000 - 19,000
 4. 15,000 - 17,000
 5. 13,000 - 15,000
 6. 11,000 - 13,000
 7. 9,000 - 11,000
 8. 7,000 - 9,000
 9. below 9,000

APPENDIX C

Rosenberg Self-Esteem Scale

ID# _____

DIRECTIONS: For each of the ten items listed below, indicate your degree of agreement with each statement in the space to the left of the item. Please rate each statement according to how you are feeling right now.

1 /	2 /	3 /	4 /
Strongly agree	Agree	Disagree	Strongly disagree

Make your ratings
here

- _____ 1. I feel that I'm a person of worth, at least on an equal basis with others.
- _____ 2. I feel that I have a number of good qualities.
- _____ 3. All in all, I am inclined to feel that I am a failure.
- _____ 4. I am able to do things as well as most other people.
- _____ 5. I feel I do not have much to be proud of.
- _____ 6. I take a positive attitude toward myself.
- _____ 7. On the whole, I am satisfied with myself.
- _____ 8. I wish I could have more respect for myself.
- _____ 9. I certainly feel useless at times.
- _____ 10. At times I think I am no good at all.

APPENDIX D

DACL Form A
By Bernard Lubin

Name _____ Age _____ Sex _____

Date _____ Highest grade completed in school _____

DIRECTIONS: Below you will find words which describe different kinds of moods and feelings. Check the words which describe How You Feel Now--Today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly and check all of the words which describe how you feel today.

- | | |
|--------------------------|-------------------------|
| 1. _____ Wilted | 17. _____ Strong |
| 2. _____ Safe | 18. _____ Tortured |
| 3. _____ Miserable | 19. _____ Listless |
| 4. _____ Gloomy | 20. _____ Sunny |
| 5. _____ Dull | 21. _____ Destroyed |
| 6. _____ Gay | 22. _____ Wretched |
| 7. _____ Low-spirited | 23. _____ Broken |
| 8. _____ Sad | 24. _____ Light-hearted |
| 9. _____ Unwanted | 25. _____ Criticized |
| 10. _____ Fine | 26. _____ Grieved |
| 11. _____ Broken-hearted | 27. _____ Dreamy |
| 12. _____ Down-cast | 28. _____ Hopeless |
| 13. _____ Enthusiastic | 29. _____ Oppressed |
| 14. _____ Failure | 30. _____ Joyous |
| 15. _____ Afflicted | 31. _____ Weary |
| 16. _____ Active | 32. _____ Droopy |

APPENDIX E

Attribution Rating Scale

A) Write down the one major cause for your performance on the preceeding task _____

B) Is the cause of your performance on this task due to something about your or something about other people or circumstances?

Totally due to other
people or circumstances

Totally due
in me

1 2 3 4 5 6 7

C) In the future when performing this task, will this cause again be present? (circle one number)

Will never again
be present

Will always
be present

1 2 3 4 5 6 7

D) Is the cause something that just influences your performance on this task, or does it also influence other areas of your life? (circle one number)

Just this
particular task

Influences all
situations in
my life

1 2 3 4 5 6 7

E) How important was it for you to perform well on this task?

Very Important

Not at all
Important

1 2 3 4 5 6 7

F) How anxious did you feel after doing this task?

Very anxious

Not anxious
at all

1

2

3

4

5

6

7

APPENDIX F

DEBRIEFING FORM

I understand that the purpose of this experiment was to assess the effects of the feedback given on the first cognitive task on my performance on the anagram task. I further understand that the number of correct and incorrect responses delivered by the experimenter was pre-determined and, therefore, in no way reflected the accuracy of my answers or my ability to perform such tasks. I promise not to reveal the actual purpose of the experiment to any other student.

Signature

Date

APPENDIX G. Design of Study

<u>Condition</u>	<u>Abbreviation</u>	<u>middle class n</u>	<u>lower class n</u>
1. No Treatment	NoTx	5	5
2. External Attribution	EA	5	5
3. Internal Attribution	IA	5	5
4. No Attribution (Failure)	NAF	5	5
5. No Attribution (Success)	NAS	5	5

Dependent Measures

1. Anagram performance (number solved/average time to solution/trials to criterion)
2. Rubick's cube performance (time spent/desire to continue)
3. Self-esteem (pre/post pretreatment)
4. Depressed mood (pre/post pretreatment)
5. Attributions about pretreatment task

APPENDIX H. Means and Standard Deviations of Anagram Performance

<u>Condition</u>	<u>n</u>	<u>Number Correct</u>		<u>Average Time</u>		<u>Trials to Criterion</u>	
No Treatment		M	SD	M	SD	M	SD
Middle Class	5	12.2	4.5	58.0	20.4	16.2	8.4
Lower Class	5	15.6	3.5	36.3	19.3	8.0	8.0
External Attribution							
Middle Class	5	11.8	2.4	60.6	11.6	13.4	9.2
Lower Class	5	13.6	3.9	47.4	21.1	12.6	10.13
Internal Attribution							
Middle Class	5	14.4	3.2	45.3	22.1	5.2	8.2
Lower Class	5	12.0	3.0	57.4	20.4	19.0	2.2
No Attribution (Failure)							
Middle Class	5	11.7	2.8	61.6	13.2	16.5	7.0
Lower Class	5	11.5	1.7	56.0	6.7	10.5	10.4
No Attribution (Success)							
Middle Class	5	13.6	6.3	70.1	29.3	5.0	8.3
Lower Class	5	13.6	3.4	49.3	17.7	14.2	8.1

Note: Subjects were given 100 sec. to solve anagrams. If they did not solve within the allotted time a latency of 100 sec. was recorded.

Trials to criterion was defined as 3 consecutive anagrams solved within 15 sec.

APPENDIX I. Means and Standard Deviations for Self-Esteem and Mood Scores

<u>Condition</u>	<u>n</u>	Self-Esteem				Depressed Mood			
		pre		post		pre		post	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
No Treatment									
Middle Class	5	17.0	3.3	18.0	3.8	8.2	6.7	13.2	5.3
Lower Class	5	16.6	4.9	16.6	4.9	7.2	3.4	8.0	3.8
External Attribution									
Middle Class	5	15.8	2.5	16.4	3.7	6.4	2.8	8.8	4.1
Lower Class	5	18.2	4.9	15.6	0.5	4.8	3.4	7.0	3.7
Internal Attribution									
Middle Class	5	18.0	2.1	19.0	3.3	8.6	0.8	10.6	3.5
Lower Class	5	15.4	2.5	16.2	1.9	5.4	3.5	10.6	6.8
No Attribution (Failure)									
Middle Class	5	16.5	2.3	17.7	2.6	6.5	3.3	9.0	4.7
Lower Class	5	17.5	6.0	15.0	3.3	7.5	5.4	8.6	5.2
No Attribution (Success)									
Middle Class	5	17.8	4.9	17.8	4.1	10.4	4.1	12.6	6.5
Lower Class	5	16.8	2.9	19.4	2.8	11.4	9.4	14.2	9.0

Note.--High scores on self-esteem measure indicate low self-esteem. High scores on depressed mood measure indication high depressed mood.

APPENDIX J. Means and Standard Deviations for Subjects' Ratings

<u>Condition</u>	<u>n</u>	<u>I-E Attribution</u>		<u>S-US Attribution</u>		<u>Glo-Sp Attr.</u>		<u>Importance</u>		<u>Anxiety</u>	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
No Treatment											
Middle											
Class	5	5.4	1.5	5.6	1.6	3.2	2.0	4.4	1.8	3.2	1.6
Lower											
Class	5	3.6	1.6	5.0	1.4	2.6	1.3	4.8	1.3	3.8	1.0
External Attribution											
Middle											
Class	5	5.4	0.8	3.8	0.8	2.4	1.1	3.4	1.5	4.0	1.8
Lower											
Class	5	4.2	2.1	4.6	1.5	3.0	2.0	4.0	1.8	3.6	2.0
Internal Attribution											
Middle											
Class	5	5.5	1.7	5.7	1.8	3.0	2.3	3.5	1.0	3.5	1.7
Lower											
Class	5	5.6	1.2	3.5	1.2	2.8	1.3	4.0	1.6	4.5	1.0
No Attribution (Failure)											
Middle											
Class	5	5.0	2.5	5.0	2.0	4.0	2.0	2.0	0.7	3.0	1.4
Lower											
Class	5	3.4	2.5	5.4	1.5	3.0	2.3	4.2	2.5	4.8	2.2
(Success)											

Note: I-E = Internal-External Attribution
 S-US = Stable-Unstable Attribution
 Glo-Sp = Global-Specific Attribution

APPENDIX K. Means and Standard Deviations of Persistence Measures

<u>Condition</u>	<u>n</u>	<u>Time</u>		Continue-Discontinue	
		M	SD	M	SD
No Treatment					
Middle Class	5	15.0	0.0	1.4	0.5
Lower Class	5	15.0	0.0	1.4	0.5
External Attribution					
Middle Class	5	15.0	0.0	1.4	0.5
Lower Class	5	15.0	0.0	1.4	0.5
Internal Attribution					
Middle Class	5	15.0	0.0	1.2	0.4
Lower Class	5	14.4	1.3	1.6	0.5
No Attribution (Failure)					
Middle Class	5	15.0	0.0	1.5	0.5
Lower Class	5	15.0	0.0	1.5	0.5
No Attribution (Success)					
Middle Class	5	15.0	0.0	1.2	0.5
Lower Class	5	13.0	4.4	1.4	0.5

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INTERNAL-EXTERNAL ATTRIBUTIONS
AND LEARNED HELPLESSNESS AMONG LOWER
AND MIDDLE CLASS ADULTS

by

Linda Frances McDonnaugh

(ABSTRACT)

The present study tested Abramson, Seligman, and Teasdale's (1978) reformulation of the learned helplessness hypothesis. Specifically, the study employed a laboratory paradigm to investigate: (a) whether attributions about uncontrollable events mediate subsequent deficits, particularly self-esteem loss; and (b) if lower socio-economic class individuals are more susceptible to helplessness following uncontrollability than are middle class individuals. All subjects were Black female college students, 25 from the lower class and 25 from the middle class. These subjects were randomly assigned to one of five experimental conditions: internal attribution provided for failure to a concept-identification task, external attribution provided for failure, no attribution provided for failure, no attribution provided for success, and no pretreatment task. All subjects were then tested for performance deficits on an anagram-solving task. Additional dependent variables included mood change, self-esteem change, and persistence at Rubick's Cube. A two-way analysis of variance using

the factors social class and experimental condition revealed few differences across groups on any of the measures. Possible reasons for the failure to obtain differences were discussed.