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ABSTRACT

Learned helplessness has recently incorporated attribution theory to predict the specific occurrence/nonoccurrence of the motivational, cognitive and affective deficits characteristic of helplessness. College students (N=50) participated in a study to investigate the effects of a personal-universal helplessness manipulation on subsequent task performance. Subjects were divided into three groups: contingent, noncontingent, and control. The noncontingent group was subdivided into two groups and given false feedback about the performance of their peers. All subjects completed the Lubin's Adjective Checklist as well as the Levine Problem-Solving task which measured performance differences among the groups. In agreement with learned helplessness theory, the group exposed to noncontingency manifested longer latencies on the Levine task solution than the contingent or control groups. However, contrary to predictions, this deficit was observed only in the universal helplessness condition. No emotional deficits were revealed by the Adjective Checklist. The findings suggest that the often observed behavioral deficit in depressed college students may be primarily motivational in nature. (Author/JAC)

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Universal and Personal Helplessness:

A Test of the Reformulated Model

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responses and outcomes will be noncontingent. Both universal and personal helplessness are characterized by motivational, cognitive and emotional response deficits. Personal helplessness is additionally characterized by a loss in self-esteem. Little research has yet been done to test this aspect of the revised theory.

This study was designed primarily to investigate the effects on subsequent task performance of a personal-universal helplessness manipulation. It was hypothesized that a deficit in self-esteem would occur only in subjects exposed to a personal helplessness situation.

Method

Subjects. Subjects consisted of 50 college students enrolled in an introductory course in psychology at the State University of New York at Albany. Subjects were told that the study was an investigation of reward and its effects on a subsequent cognitive task. By participating in the study, subjects received partial credit toward fulfilling a course requirement. One male subject was dropped because he refused to follow experimental procedure; one female subject was dropped because of external disruption in the lab during the test phase; one female subject was dropped because of procedural error. Half of the subjects were male, and half were female.

Procedure. Subjects were randomly divided into three

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groups: contingent (13), noncontingent (22) and control (12). In order to examine the resulting behavioral deficits of personal versus universal helplessness, the noncontingent group was further divided into two groups (N=11) given false feedback about the performance of their peers. After completing the helplessness training phase of the study those assigned to the universal helplessness group were told that other college students could not learn the appropriate response in the previous task, while those assigned to the personal helplessness group were told that other college students readily learned the appropriate response. Each noncontingent subject was yoked to a contingent subject of the same sex, and received the same schedule of reinforcement as that of his/her partner. Three women, one undergraduate and two graduate students, served as experimenters. Each of the experimenters individually tested approximately the same number of subjects in each of the three conditions. Experimental instructions stressed that this was a study of reward and its effects on a subsequent cognitive task.

Each subject was given the Lubin's Adjective Checklist Form C, consisting of 32 words which could be classified generally as reflecting positive or negative feelings about oneself (Lubin, 1967). Subjects were not given Lubin's standard instructions for administering the checklist

because the present study did not share Lubin's intent to assess stable personality dispositions. Because change in feelings attributable to treatment condition was of focal interest, subjects were instructed as follows:

"This questionnaire lists words which describe different kinds of moods and feelings. Check the words which describe how you feel right now--at this moment. Some of the words may sound alike, but check all of the words which describe how you feel at this moment."

Although Lubin's Adjective Checklist is most often used as an index of depression, investigators have found that many of the Checklist's adjectives assess affective states other than depression, and that there is no evidence that the DACL is differentially sensitive to depression (McNair, 1972).

Upon completion of this form, control Ss were asked to wait until it was time to continue. Each subject was left alone in a cubicle for twenty minutes, a period of time equivalent to pretreatment. At this point each contingent and noncontingent subject received the pretreatment with the following instructions:

"You will be given trials on this apparatus. Each trial will be signalled by the onset of a yellow light. When you see the yellow light on, there may be something you can do to make the green light come on. If you do not make the appropriate response, the red light will come on signalling the end of the trial and the fact that you have not made the appropriate response. Taking apart the apparatus is not the appropriate response. I can repeat these instructions, but cannot answer any questions for you at this time. If you are ready, we will begin. I will return when you have completed the task."

The apparatus used was similar to one employed by

Hiroto and Seligman (1975). Three spring-loaded buttons were mounted in a row on a plexiglass black box (dimensions 23 cm x 14 1/2 cm). Five cm above each button was a light with the green light on the left signalling reward, the yellow light in the middle signalling trial onset and the red light on the right signalling unsuccessful trial termination. In the contingent condition pressing the middle button four times caused the reward light to go on. In the noncontingent condition none of the buttons had any effect on reward.

Contingent subjects could turn on the green light by pressing the middle button four times. Noncontingent subjects received the same schedule of reinforcement as that of their yoked partners. Pilot testing had indicated that contingent subjects would find it moderately easy to learn the appropriate response after several trials.

When the experimenter re-entered the cubicle, she gave false feedback to noncontingent subjects. Those assigned to the universal helplessness condition were told: "Many college students are not able to do this task very well. They cannot quickly learn how to make the green light come on each time." Those assigned to the personal helplessness group were told: "Many college students do very well at this task. They are able to quickly learn how to make the green light come on each time."

Subsequent to the pretreatment/waiting period, subjects were given Lubin's Adjective Checklist form G, consisting of 34 words, in order to assess mood change.

The Levine Problem-Solving task was used to test whether or not there were differences in performance among the four groups (Levine, 1966). Tapping hypothesis-testing skills, the Levine task has been used in previous helplessness research as both a pretreatment and a test (Hiroto and Seligman, 1975, Griffith, 1977). A problem consisted of eight 4 x 6 inch cards characterized by four dimensions (letter, color, size, border), with each dimension manifested in two ways (B, X; green, black; large, small; circle, square). Eight problems were administered to each subject preceded by the following instructions and a practice problem:

"You will now be presented with several problems. Each problem is made up of 8 cards just like this one (show sample card). Each card will always have two different letters - B and X; each letter will be green or black. There will be a circle around each letter or a square around each letter. Each letter will be large or small. "B", "X", green, black, circle, square, large, small are all called characteristics. There are 8 characteristics in all; can you name them? (pause). For each problem, or set of 8 cards, I have chosen in advance one characteristic to be correct. This characteristic could be the letter B, the letter X, the color green, the color black, the circle, the square, large or small. Your job is to try to figure out which one of the 8 is the correct characteristic. You are to pick one side on each card which you think has the right answer. I will tell you if your answer is correct or incorrect. I have already marked on the sheet what the correct characteristic will be for each problem. After you go through 8 cards, you can tell me what you think is the correct characteristic. Then we will start a new problem. You can take as much time as you want for each problem set,

but your answer will be timed. By my telling you correct or incorrect, you can figure out what the right answer is. Try to figure out what the right answer is as soon as you can. Let us start with a practice trial."

All subjects correctly solved the practice problem before receiving the eight test problems to ensure that everyone understood task instructions. Response latency to solution was taken as a measure of motivation, while number of problems solved correctly was taken as a measure of cognitive deficits.

Subjects were then asked to complete Lubin's Adjective Checklist form E consisting of 34 words. Contingent and noncontingent subjects were then asked to indicate on a 7 point scale how much control they believed they had during the button-pressing task, and why they felt this way. Subjects were then thanked and debriefed.

Results

Pretreatment. As suggested by pilot work, the students in the contingent group easily mastered the instrumental task. This group, and therefore both of the yoked noncontingent groups, received the positive outcome on the average of 7.92 (S.D.=3.5) trials on the last 10 trials of the pretreatment, but only on the average of 1.38 (S.D.=2.75) on the first 10 trials, with an average of 24.62 (S.D.=13.61) on all 45 trials. A t-test performed on the first and last block of ten trials indicated that subject performance significantly improved over time (t

(24)) = 5.304, $p < .001$).

Levine Task. The main result of this study was that subjects in the universal helplessness group showed a pattern of decrements in task solution latencies significantly different from the patterns displayed by the remainder of the groups. Figure 1 illustrates that all

Insert Figure 1 about here

groups showed a decrease in latencies across trials ($F(7, 273) = 9.84, p < .01$); however the universal helplessness group had initially longer latencies than the remaining groups. This pattern of changes in latencies resulted in a marginally significant Groups (4) x Trials-quadratic (8) interaction ($F(3, 39) = 2.52, p = .072$). Decomposition of this interaction supports the impression given by Figure 1 that the universal helplessness group differed significantly from the remaining three groups ($F(1, 39) = 7.86, p < .01$), none of which differed from each other (F 's < 1.0).

Analyses of the number of correct hypotheses on the Levine task failed to show any significant effects of the treatment variable, the sex variable, or any interaction between the two (p 's $> .10$). This is not surprising because all subjects had successfully completed a sample problem before they were presented with the task problems. Analysis of the potential changes in feelings about

onesself as a function of treatment or sex variables also failed to demonstrate any significant effects (p 's $> .10$).

Perception of Noncontingency. As a check on the effectiveness of the noncontingent manipulation, subjects were asked to rate the degree of control they felt they had on the instrumental task using a 7 point scale (0 = no control, 7 = complete control). Both of the noncontingent groups reported that they had little if any control over the instrumental task. Mean degree of control reported by the personal helplessness group and the universal helplessness group was 0.42 (S.D.=.35) and 0.80 (S.D.=1.20) respectively. A t -test revealed no significant difference in the perception of controllability between the two noncontingent groups ($p > .10$). Mean degree of control reported by the contingent group was 3.5 (S.D.=3.2). T -tests revealed a significant difference in the perception of controllability between the contingent and universal helplessness groups ($t(16) = 4.5, p < .001$) and between the contingent and personal helplessness groups ($t(13) = 5.23, p < .001$). The data strongly suggest that our noncontingent pretreatment was indeed effective.

Discussion

In support of helplessness theory, the noncontingent pretreatment was found to retard response latencies on the Levine task in the group which had received feedback

designed to induce universal helplessness. This group had been told that "Many college students are not able to do this task very well. They cannot quickly learn how to make the green light come on each time." This feedback should have induced universal helplessness, even though subjects had received a high frequency of positive outcomes: I did not learn the appropriate response to elicit the green light, but neither did my peers. These subjects had perceived the noncontingency as evidenced by their responses on the contingency perception feedback questionnaire. Perceiving the noncontingency between response and outcome should cause the subject to feel that he had not learned the appropriate response to control the outcome.

In the present study the personal helplessness manipulation did not produce a deficit. This finding seems to be inconsistent with the results of Hiroto (1974) and Hiroto and Seligman (1975) who found motivational deficits as indexed by longer latencies to initiate responding and cognitive deficits as indexed by fewer number of correct problems solved compared to the contingent and control groups. It must be recalled that Hiroto's experiments were done prior to the reformulated model, and did not include universal/personal feedback manipulations. It is conceivable that a large portion of Hiroto's subjects may have

attributed their experience of uncontrollability to the universal case -- neither they nor their peers could have controlled the outcome in this situation.

Although the absence of a deficit in the personal helplessness condition would seem to be inconsistent with the Abramson et al (1979) reformulated model of learned helplessness, it can be accounted for by a revised model of learned helplessness proposed by Roth (1980). The sequence of steps Roth has outlined for deficits associated with learned helplessness to be manifested are as follows: 1) objective noncontingency must result in the subject deciding that he either could not or did not have control over outcomes, 2) this must lead to the subject's perceiving that response and reinforcement are independent, 3) the subject must perceive a similarity between the training task and test task contexts and must make general attributions for the cause of response-reinforcement independence, 4) this leads to the formation of an expectancy that future response-reinforcement situations will be independent, and 5) if the subject places a low value on his performance on the subsequent test task, he will manifest deficits associated with learned helplessness. On the other hand, if at this point the subject places a high value on his test task performance, either no learned helplessness effect will occur, or

performance will actually be enhanced.

In the present investigation both the universal and personal helplessness groups indicated on a feedback questionnaire that they perceived noncontingency on the instrumental task. Instructional set and procedural details (e.g., same experimenter and the same experimental context) should have led subjects to believe that the situational similarity between the two experimental tasks was high. Experimental instructions had stressed that performance on the instrumental task and the cognitive task would be highly related. It can be speculated that subjects who had perceived noncontingency and were told that many other college students had had difficulty learning the task, would be likely to reduce substantially the value of their performing successfully on that task, as well as on the upcoming task, which should have been viewed as highly related. If an individual felt that his peers were not performing well on a certain task, he would be likely to feel that his own performance on the task was not that important. In contrast, those subjects who had perceived noncontingency and were told that many other college students had done very well at the task would be likely to place a high value on successful task performance. If an individual felt that his peers were performing very well at a task while he was performing very

poorly, he would be likely to feel that it was very important for himself to do well. Consistent with Roth's revised model, the universal helplessness group manifested motivational deficits associated with learned helplessness, while the personal helplessness group manifested no helplessness effects.

The Abramson et al. (1978) reformulated model clearly predicts that both personal and universal helplessness manipulations would result in motivational, cognitive and emotional deficits, but that only personal helplessness situations could generate losses in self-esteem. Any cognitive deficit, operationally defined as number of correct problems, which would have occurred was eliminated by the design's requirement that all subjects successfully complete the practice problem before being presented with the eight test problems. Frequently, this necessitated repeating the practice problem several times. It was essential that all subjects understood the rather complex instructions for the Levine task before assessment, so that any response deficits could be attributed to prior exposure to uncontrollability and not to basic failure to understand instructions.

Neither of the noncontingent groups showed a significant change in feelings about oneself. Some support for an emotional deficit resulting from

noncontingency has been rendered by Griffith (1977) who found a mood change toward increasing depression in noncontingent failure subjects and a shift toward increasing anxiety in noncontingent success subjects. It should be noted, however, that Griffith did not assess self-esteem, but focused on changes in anxiety and depression. He employed the Paired Anxiety and Depression Scale (Mould, 1975), which consists of a forced choice scale pairing an anxiety adjective with a depression adjective, thus restricting subjects to two choices, neither of which may have accurately described their feelings. We used a more general, open-ended adjective checklist to monitor positive or negative feelings about oneself, that perhaps was not sensitive enough to pick up shifts.

Perhaps the salient characteristic of human adult helplessness is the motivational deficit generated by the perception of noncontingency and the attribution that relevant others would also find the situation noncontingent. This is consistent with recent findings of Alloy and Abramson (1979) who have argued that human helplessness may be primarily motivational, since the depressed college students in their study did not show a deficit in their perception of contingency. The often observed behavioral deficit in depressed college students

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(Klein & Seligman, 1976; Miller & Seligman, 1975) may be primarily motivational in nature.

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Footnote

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Figure Caption

Figure 1. Mean trial latency to completion of the Levine task for each of the four treatment groups.

