

Choosing to Suffer as a Consequence of Expecting to Suffer: Why Do People Do It?

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In three previous studies, most subjects who anticipated having to perform an unpleasant task (e.g., eat a worm) and who were then offered a choice of that or a neutral task chose the unpleasant task. It was hypothesized that this "choosing to suffer" effect was produced by the subjects' attempt to make sense of their anticipated suffering, through one of three kinds of change in their conception of themselves and the situation: (a) they deserved the suffering, (b) they were brave, or (c) the worm was not too bad. Subjects anticipating a neutral task did not change on these measures, while subjects eating a worm changed significantly, indicating that anticipated suffering did cause the predicted reconceptualizations. Changes in these three kinds of conception predicted subject's choice or not of eating the worm, indicating that these changes produced the subsequent choice. Finally, subjects who saw themselves as either more brave or more deserving also chose to administer painful electric shocks to themselves, while subjects who had changed their conceptions of the worm did not, indicating that these conceptual changes can affect behavior in situations different from that which initially caused the conceptual changes.

In a few more or less unrelated studies, a particularly paradoxical bit of behavior has been observed, that subjects often "choose" to suffer as a consequence of having expected to suffer. For example, when subjects were assigned an unpleasant task (e.g., eat a caterpillar) and given a short time to wait in this state of "negative expectancy," approximately 80% chose this unpleasant task when given the opportunity to perform a neutral task instead (Aronson, Carlsmith, & Darley, 1963; Foxman & Radtke, 1970). Moreover, such "negative expectancy" subjects tend to shock themselves more during the expectancy period than do other subjects (Walster, Aronson, & Brown, 1966).

Neutral expectancy control subjects who were assigned to perform a neutral task behave as common sense suggests: No neutral expectancy subject in any of the studies has ever chosen a negative task. In addition, subjects who are given a negative expectation, but given no period of time alone to await the negative event, also do *not* choose the negative event (Aronson et al., 1963; Fox-

man & Radtke, 1970). Clearly then, something happens during the interval *between* a subject's assignment to a negative event and his subsequent choice which influences most subjects to choose to perform the negative event though they no longer must.

Foxman and Radtke (1970) proposed an "anxiety adaptation" hypothesis, in which the subjects were presumedly becoming more accustomed to feeling anxious and hence did not mind choosing the caterpillar. This explanation suffers from being rather vague about the mechanisms involved and, indeed, could be taken as no more than a description of what happened: that a previously noxious stimulus became less so. In addition, it does not really make a great deal of sense to posit some mechanism, similar presumably to sensory adaptation, such that not only does the stimulus lose some of its potency, but, in fact, "reverses" and now becomes positive. In the other two studies of this sort (Aronson et al., 1963; Walster et al., 1966), the explanations offered were post hoc (in fact opposite predictions had been made by Walster et al.), tentatively offered hypotheses drawn from cognitive dissonance theory and, indeed, both of these authors confess to uncertainty and dissatisfaction with their own explanations.

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The present study represents an attempt to understand these effects of negative expectancies in terms of the kinds of cognitive changes which might be expected to occur in subjects in these situations. The theoretical perspective adopted here has been called "self-perception theory" (Bem, 1972) and "self-attribution theory" (Kelley, 1967). However, it is clear that cognitive dissonance theory (Festinger, 1957) could as easily encompass the results reported here. The use of the self-attribution language should be understood as representing the authors' preferences, rather than any suggestion that one or the other perspective is more adequate in this context.

In the self-attribution view, the experiences we all have of our "inner, mental states" are instead taken to be interpretations of our behavior and the context of its occurrence. Feelings or awareness of our attitudes, emotions, motives, etc. are seen, then, as information about our behavior or our behavioral dispositions and not as causes of the particular ongoing behaviors. These bits of "information" are presumed to have the same kinds of effects on subsequent behaviors that any other information might have. Thus, we might assume that the sequence of events begins with an individual doing something, noticing what he is up to and interpreting his behavior in the form of attributing some property to himself and then subsequently acting in the ways in which he believes someone who possesses that property would or should behave. As an example, consider a man who is confronted by some intense frustration. He responds with physiological arousal, a scowl, clenched fists, and a harsh tone of voice. He then becomes aware of these behaviors in a highly integrated way, which he experiences simply as the feeling of "anger." At that point, he may then try to inhibit his "angry" behavior or find an appropriate target, or assess his chances of winning a fight, or any number of other things. The point is that the feeling of anger was a product of one set of behavior, in this case mostly automatic, and subsequently affected some other quite different kinds of behavior (Laird, 1974).

Applying this theory to the phenomenon of negative expectancy, the general assumption is that the subjects in these experiments

were simply trying to make sense of their impending suffering and, somehow, the sense they made of it led them to then go on and choose to suffer when the opportunity to escape suddenly became available. Of course, it in fact made *no* sense for them to try to make sense of their suffering since their assignment to the negative conditions was clearly described as due to chance. They "ought" to have thought merely that it was unfortunate that they would have to endure this unpleasantness and, then, have leaped at the chance to avoid it. Obviously, however, they did not follow this line of thought and action.

There is a clearly parallel phenomenon in the realm of other attribution. In a series of studies, Lerner and his associates have demonstrated that subjects who are exposed to another person purportedly suffering, but chosen for the suffering quite by chance, apparently are unable to "believe" in the effects of chance and instead treat the sufferer as if he deserved his fate (Lerner & Simmons, 1966). Since the root assumption of self-attribution theory is that people understand and know themselves in precisely the same way in which they know others, it would not be surprising to find that a similar failure to accept the workings of chance occurs with respect to self.

There seems to be three major ways of "making sense" of the negative expectancy situation. One has already been mentioned; as suggested by Lerner's work, the person may conclude that he deserves his fate, that he is a bad person. A second alternative is that the person may attribute to himself some "positive" qualities, for instance, that he is a brave person or a person who is willing to sacrifice for the sake of science. This possibility was implied by one of Walster et al.'s (1966) dissonance explanations of the negative expectancy phenomenon. A third possibility is that an individual may not change his conception of himself at all, but instead change his conception of some aspect of the external circumstances, particularly of the negative task. For example, the negative task may be seen as not as unpleasant as it first seemed, so that, for instance, the subject might have concluded that eating caterpillars

was really not so bad after all. This notion has been involved indirectly in some of the dissonance explanations offered by Aronson et al. (1963).

The central hypothesis of this study was that the paradoxical effects of expecting to suffer on later choices were due to subjects changing their conceptual systems in one or another of these three ways. The general form of the study was, then, to introduce subjects to a negative expectancy situation, measure changes in their conceptions of themselves and the situation, and to relate these changes to their subsequent behavior.

The negative expectancy format employed was similar to that used by Aronson et al. (1963) and Foxman and Radtke (1970). A subject was told he will eat a worm, sat waiting for the negative event for 10 minutes, then was given a choice between the negative event and a neutral event. Measures of the subjects' conceptions of themselves and the situation were obtained near the end of the waiting period prior to the subsequent behavioral choice. These measures were then compared to identical measures obtained a month earlier to assess changes in either self-conception or conceptions of the situation which might have occurred during the expectancy period. Within these measures there were separate subscales measuring each of the domains which seemed to offer some opportunity for "making sense" of the anticipated suffering.

Two additional groups of hypotheses depended on the observation of these reconceptualizations. The first concerns the relationships among the alternative strategies of conceptual change. While discussion thus far had assumed the likelihood that one of the three available directions (negative self-attribution, positive self-attribution, or external attribution) would be preferred, this assumption obviously required testing. Then, if it appeared that individuals do, in fact, employ only one of the possible alternatives, these behaviors could be related to other indices of "attributional style." In a recent study (Laird & Berglas, in press) a scale, the Locus of Causal Attribution Scale, was developed which reflected the degree to which individuals attribute their behaviors to causes within

themselves as opposed to causes in their situations. Individuals who tended to assign the causes of their behavior to themselves might be expected to employ either the "deservingness" or the "bravery" options in the negative expectancy situation, while people who see the causes of behavior as residing more in situations might be expected to change their evaluation of the worm.

The second group of hypotheses and expectations in this experiment involved the relationship of subjects' attributions to their subsequent choice behavior. First, insofar as the subjects' attributions are seen as the cause of the subsequent negative choice behavior, it was expected that experimental subjects who did not later choose the negative event would be individuals who had not reconstrued themselves or the negative situation.

Second, if one decides that the worm one is going to eat is not really so bad, then one has made a relatively small change in his view of the world, one that has implications only for a restricted range of future actions, all involving worms. The individual who changes his conception of himself, on the other hand, has made a change of much broader potential importance. If he deserves this piece of suffering, perhaps he also deserves other kinds of distress. If he is brave and sacrificing, he must be so in all situations. The empirical implication of this distinction is that a person who changes his view of himself should choose to suffer, whatever the suffering and its relationship to his original expectations. The person who changes his conception of the specific negative event, on the other hand, should perhaps be willing to choose that event later, but there is no reason for him to choose some new negative experience. This line of thinking was assessed by the addition of another experimental group that was given the original worm-eating expectation, but then following the waiting period were offered the choice of the neutral task and a different negative task, giving themselves painful electric shocks. The specific hypothesis was that those who had changed their views of their own bravery or deservingness would also choose the shock, whereas those who had only changed their views of the worm would not.

METHOD

Subjects

Fifty subjects (27 males and 23 females) participated in the study. All were freshmen and sophomore students in introductory psychology courses. Subjects were assigned to one of three conditions (worm expectancy and worm choice, 15 subjects; worm expectancy and shock choice, 20 subjects; neutral expectancy control condition, 15 subjects). The male-female distribution was approximately equal for each condition. No differences between the sexes were observed in any of the dependent measures.

Measures

The scale to measure hypothesized changes in conception of self consisted of 22 statements about oneself, each of which was to be rated on a 14-point continuum ranging from "not at all true" to "very true." Six statements were expected to reflect negative self-attribution (deservingness). These statements were modifications of those used on a scale measuring guilt (Coopersmith, 1967) and included items such as: "I wish that I could make up for something(s) that I've done recently."

Two statements were expected to reflect positive self-attribution. They were derived from "dissonance" interpretations in the Walster et al. (1966) study. The positive self-attribution statements employed in the questionnaire were: "I am a brave person" and "I am a sacrificing person."

Dembo (1960) has found that suffering or unpleasantness is frequently interpreted to be desirable. Accordingly, four statements were included in the survey to ascertain the degree to which a subject may "generally" view a negative situation in a positive manner, including as an example, "I want to suffer sometimes to put things in proper perspective."

The remaining 10 statements were filler items. All statements were randomly mixed for presentation on the questionnaire, which was presented to the subjects as a personality survey. Each subject filled out the survey twice (before and during expectancy period).

The measure of change in "worm-eating pleasantness" could not be so straightforward. Asking an individual to rate how pleasant or unpleasant eating a worm would be is unfortunately a very reactive measure. Once you have asked a subject that unusual question, he is likely to remember the question and his answer for a long time. Thus, it was not possible to ask subjects for a preassessment and postassessment of the desirability of eating a worm. Instead a different strategy was employed. Subjects were asked at the time of the postmeasure on the self-conception questionnaire to rate on a scale of 16 the pleasantness of the worm-eating task and then to rate how they thought other people would rate the same thing. The latter was interpreted as reflecting what the subjects' ratings of the worm-eating would have been at the beginning of the experiment. The rationale for this was that although

there was no expectation that the subjects would be aware of the change in their own evaluation, they would have a reasonably accurate idea of how others must feel and would be able to compare how they felt now with that standard. Fortunately, the experiment contains within it some check on these assumptions. One would predict, if these assumptions were true, that the negative expectancy and neutral expectancy groups would not differ in their assessments of where the general "other" was, and that among the neutral expectancy group there would be little if any difference between the evaluations of self and other people. Among the negative expectancy group there would be expected to be at least some individuals who showed marked discrepancies between their judgments of themselves and of the other.

A scale to measure characteristic styles of responsibility assignment was also administered (Locus of Causal Attribution Measure). It was devised (Laird & Berglas, in press) from a study by McArthur (1972) and was administered to subjects in order to premeasure the general direction to which a subject attributes responsibility (i.e., to persons or situations).¹

At the conclusion of the experiment, before debriefing, subjects were administered a brief questionnaire to ascertain the degree to which they had believed and accepted the "cover story" of the study.

Procedure

At the time subjects were recruited, they were told that the experiment was concerned with the relationship between various physiological measures and changes in personality variables following the performance of "certain tasks." Thus, the subjects would spend 10 minutes *now* completing a pretask personality survey (actually the "deservingness" and "bravery" premeasures) and 40 minutes *next week* performing an experimental task and then completing the personality survey again. In fact, each subject was not contacted until 1 month later and an appointment was made for the second part of the study.

When the subject entered the experimental room, he was greeted at a table; on one side of the table were eight covered cups which weighed different amounts (neutral weight discrimination task); across the table was a plate with a dead worm on it, a cup of water, a napkin, and a fork (worm-eating task); and in Experimental Condition B on a third side was an inductorium system for shocking oneself.

The experimenter immediately read a statement describing the psychology department's policies on participation in research and reminding the subjects they were "free to refuse or to terminate partici-

¹The Hidden Figures Test-form V (copyright Educational Testing Service) was also administered, but no relationships were predicted and none were observed.

pating at any time in a study if, for any reason, you find it difficult to participate."

Subjects in all conditions then performed the weight discrimination task so as to familiarize them with the neutral task. The experimenter then explained that the subjects had been randomly assigned to perform one of the three tasks, following which a number of physiological measurements would be obtained, as well as a second "personality survey." The experimenter then briefly described the experimental tasks, leafed through his papers, announced to the subject his condition, seated the subject at the table in front of his task, and left the room.

The experimenter returned in 10 minutes, explained there would be a slight additional delay and said, "While you're waiting, I was thinking, it's been quite a while since you filled out the pretask personality survey—I don't even know if it's valid anymore. Would you just fill it out again now before you eat the worm [discriminate the weights]? That way, I'll be able to judge the one you fill out after the task a lot better."

In this way the subjects were induced to provide the second measure of deservingness, bravery, etc. under conditions which led the subject to believe that the focus was on change from this second measure to a third (actually never administered) measure.

The experimenter returned in 8 minutes and asked subjects to evaluate the tasks (worm eating and weight discrimination). The format then varied only with respect to the negative choice offered. To control subjects and "worm-choice" subjects, the choice was between weight discrimination and eating a worm, while for the shock-choice condition, shock was substituted for worm eating. While the subject filled out the task evaluation sheet, the experimenter began leafing through his papers and then said, "Oh, an error has been made. You weren't exactly assigned to the right condition. You actually are supposed to choose which task you will perform, between eating the worm [giving yourself a shock on the hand] or discriminating the weights. That is, you choose either the worm [shock] or the weight discrimination. It's up to you; which will you perform?" If the subject chose the worm or shock, the experimenter then said, "Actually in light of the misrepresentation at the beginning, it would be best if you perform the weight discrimination task."

The subject then responded to a questionnaire designed to determine whether he perceived the actual purpose and focus of the experiment and then was totally debriefed concerning the focus, purpose, and slight deceptions of the study.

RESULTS

In the experimental condition, 3 subjects refused to eat a worm even before the choice between the negative event and the neutral event was revealed to them. They were excused. The remaining 35 experimental subjects

did not dispute their assignment to the condition of negative expectancy and, at least as revealed in the postexperimental questionnaire and interviews, fully expected to eat the worm, and both they and the control subjects believed the purpose of the study as described to them.

Negative Task Choices

The results with respect to "choosing" to suffer replicated those of Aronson et al. (1963) and Foxman and Radtke (1970). All of the neutral expectancy subjects chose the neutral task when the choice was offered. In the worm-choice negative expectancy condition, 12 of the 15 subjects chose to eat the worm or said that they did not care either way. In the other negative expectancy condition, 10 of the 20 subjects chose to give themselves painful electric shocks. Differences between the two negative expectancy conditions and the control condition were tested by Fisher's Exact Test (Siegel, 1956) and yielded significant differences ($p = .00001$ and $p = .002$, respectively).

Validation Analyses of Worm-Attractiveness Measure

The pattern of results with respect to the "worm-attractiveness" measure fits very closely the pattern required to support the interpretation of this as a measure of change in the attractiveness of eating a worm. The neutral and negative expectancy groups did not differ significantly in their judgments of other people's opinions (mean negative expectancy group = 2.8, mean neutral group = 1.9). Furthermore, the reports of the neutral expectancy group's own opinions of the worm's palatability and their judgments of the opinions of other people were very nearly identical, the largest discrepancy being 2 units on the 16-point scale. In the negative expectancy groups, on the other hand, many subjects showed considerably greater discrepancies, the largest being 10. Thus, the preliminary analyses all support the use of this measure.

Changes in Conceptions of Self and Situation

Since the experimental conditions were identical for both experimental groups until

after these measures were obtained, the two groups were pooled for these analyses.

Comparing all of the subjects on each of the three critical measures separately, no significant differences between the experimental subjects and the neutral expectancy subjects were found either in initial scores or in the hypothesized changes. A lack of differences in these overall analyses would be expected, however, since if there were consistent tendencies to employ one, but only one of these strategies, these analyses which compare all of the subjects on each of the three measures underestimate the degree of change on each. If, for instance, a subject had decided that worm eating was not so bad, he would be unlikely to also decide that he was a hero or deserving of suffering, since he had reconstructed the situation such that he was no longer as much of a hero or sufferer as he might have been.

Accordingly, an index combining all three of these possible strategies was developed. Change scores for both experimental and control subjects on each of the variables were converted into standard scores and then the total of the three for each subject was obtained. The mean of the sum of these standard scores for the subjects in the two experimental conditions was .36, while the mean sum of standard scores for the subjects in the control condition was -.93. This difference was significant, $t(48) = 2.55$, $p < .02$. In this more appropriate analysis, it is clear then that the negative expectancy situation had affected subjects' constructions of themselves or their situation.

To assess properly the role of these three alternative strategies and their interrelationships, it was necessary to "sort" subjects according to their dominant mode of response to the negative expectancy situation. The major dimension of variation was between those subjects who reconstructed their conceptions of themselves and those who changed their opinion of the worm. As noted above, among the control subjects the largest change in "worm preference" was 2, while among the negative expectancy subjects much larger changes occurred. Accordingly, this largest change observed among the control subjects was chosen as the cutting score.

Fourteen of the negative expectancy subjects had change scores of 3 or larger and were designated "worm attributors." These subjects were presumed to have "made sense" of their negative expectancy by changing their opinion of how bad it would be to eat a worm and would be expected not to have change scores on the self-attribution measures above those of the control group. This was, in fact, the case. The mean total self-attribution change score of the worm-attributor group was 7.43, nonsignificantly below the control group mean of 8.60 ($t < 1.0$) both of which were significantly lower than the mean of the remaining negative expectancy subjects of 12.90 (worm-attributor vs. other negative expectancy subjects, $t = 2.38$, $p < .05$; control vs. other negative expectancy subjects, $t = 1.90$, $p < .10$). This latter group was then designated as the "self-attributors."

Among the self-attributors, the change scores for the bravery and deservingness measure were highly negatively correlated ($r = -.65$, $N = 21$, $p < .01$). Subjects who changed in one way did not change in the other. They did not come to think of themselves as both more brave and more deserving of suffering. Instead they tended to think of themselves as more deserving of suffering *and* less brave or the converse. Since these changes were presumably due to attempts to make sense of the negative expectancy situation, one would not expect similar correlations among either the worm attributors, who had made sense of it another way, or the neutral expectancy subjects who had nothing to make sense of. This also was confirmed, in that the correlations between the bravery and the deservingness scores among both these groups were positive, .31 and .43, respectively, rather than negative. Although neither of these correlations are significant, they suggest that in these groups changes on these scales reflected some general differences among subjects in the variability of their responses.

In sum, the negative expectancy subjects subdivide fairly neatly into three groups. The two major divisions were: (a) the worm attributors whose increases in liking for the worms were all greater than the greatest such increases in the control group, and whose changes in conceptions of themselves were

essentially the same as those of the control group; (b) the self-attributors, whose worm-liking scores had changed no more than the changes observed in the control group, but who had changed their self-conceptions significantly more than either the control group or the worm attributors. This latter group, the self-attributors, consisted of subjects who had employed one or the other of two highly negatively correlated strategies, coming to view themselves as deserving of suffering and less brave ("negative self-attributors"), or those who had come to view themselves as heroic and helpful and less deserving of suffering ("positive self-attributors").

Correlates of Attribution Strategy

In order to test the expectation that a subject's attribution focus (self or worm) would reflect a general tendency to make sense of the world in terms of locating causes in persons or situations, the Locus of Causal Attribution (LCA) scores of self-attributors were compared with those of worm attributors. Self-attributors did indeed have significantly more "person" oriented LCA scores than did worm attributors. The mean for the self-attributors was 7.1, while the mean for the worm attributors was 5.6, where scores could range from 14, exclusively person oriented, to 0, exclusively situation oriented. This difference was significant ($t = 2.21$, $p < .05$, two-tailed).

One additional measure of change assessed whether suffering in general might have come to be seen as in some way good in itself, for example, a kind of induced masochism. However, there were no significant changes in this variable, in any of the groups, nor any differences between the neutral expectancy group and any of the experimental groups.

Relationships of Changes in Conception of Self and Worm to Subsequent Behavior

It is clear at this point that the negative expectancy led some subjects to change their conceptions of themselves or of the worm they were to eat. The relationship between these changes in conceptions and the subsequent behavioral choices was assessed by comparing the scores on the composite index of attribu-

tion change of subjects in the worm-choice condition who did or did not choose to eat the worm. This composite index of attribution change is described above and consists for each subject of the sum of his normalized scores on each of the three alternative ways of reconstruing the situation. Since only three subjects did not choose to eat the worm, parametric procedures were not appropriate. However, the three who did not choose the worm had the smallest, next smallest, and fourth from smallest change scores in this group. The probability that this array of scores would occur by chance was assessed by the Randomization Test for Two Independent Samples (Siegel, 1956). The exact probability, two-tailed, of this outcome is .009. It is clear, then, that the degree to which the subjects changed their conceptions, either of themselves or of the worms, predicts very powerfully whether they would choose the negative event subsequently.

In the worm-choice condition, in which subjects were choosing whether to submit to the negative event they had previously expected to have to endure, there were no differences between the compliance rates of the worm attributors and the self-attributors. Of the 15 subjects in that condition, 7 were assigned to the worm-attribution group and 8 were assigned to the self-attributor category. Six of each of these groups chose to eat the worm.

In the shock-choice condition, of the 20 subjects, 7 met the worm-attributor criterion and of these only 1 chose to shock himself, whereas, of the remaining 13 self-attributors, 9 chose to shock themselves. The difference between the choice rates in the shock versus worm conditions among the external attributors is significant, as tested by Fisher Exact Test ($P = .03$). The differences between the choice rates of the "self-attributor" group and the worm-attributor group in the shock-choice condition is marginally significant, again as tested by Fisher Exact Test ($P = .057$).

In short, then, it seems that not only does the amount of change subjects make in their understanding of the negative expectancy situation relate to the *likelihood* they will later choose to perform the negative event, but the kind of change they make in their conception of the situation relates to the *kinds*

of subsequent choices of negative experiences they will make.

DISCUSSION

As anticipated, people apparently chose to "suffer" after expecting to suffer because during the waiting period they changed their view of themselves and the situation in one or another of three ways. Some people seem to have made the choice because they came to see themselves as at least to some degree heroic figures who willingly would endure discomfort for the good of science, while others seem to have come to believe that they deserved the suffering to come, while still a third group simply decided that if they were going to endure it, it could not really be that bad after all.

Furthermore, it appears that individuals tended to adopt only one of these strategies and that the nature and degree of the reconceptualization an individual performed had important effects on his subsequent behavior. Any one of the three was sufficient to induce him to freely choose to endure the expected experience, one which everyone in our culture would agree was extremely unpleasant. And if his response was either of the modes of change in self-conception, then it would also lead him to choose other, unrelated kinds of unpleasantness.

A number of possible alternative explanations could be suggested for these results to avoid the conclusion that people act as "irrationally" as this interpretation implies. For instance, it might be objected that the subjects may not have believed that they would really have to eat the worm. In this study the strongest evidence against this point is that no subject revealed at any time, either on the postexperimental questionnaire or in the interviews after debriefing, that he expected not to have to eat the worm. It seemed clear at the time that the squeamishness of the experimenters was the only obstacle to the subjects' consumption of the worms and, in fact, one subject had already cut his worm up into bite-size pieces during the waiting period. Furthermore, Foxman and Radtke (1970) apparently let their subjects eat the caterpillars which were their stimulus objects and the subjects apparently did eat them.

One possible explanation of the simple choice to eat a worm or shock oneself is that subjects simply chose the task they had been assigned to initially, or the task that was most like it. However, that kind of "task inertia" explanation does not explain why subjects changed their conceptions of themselves or the situation, or why these changes were related to subsequent choices. It especially does not explain the differential rates of choosing among the worm attributors and the self-attributors in the shock-choice condition, since any inertia should be identical for both.

A third alternate explanation has been that the results are really due to experimenter "demand" or bias (Rosenthal, 1966). Experimenter demand might explain the fact that subjects chose to eat a worm in the worm-choice condition, and in the previous expectancy studies, in which the comparisons were always between groups of which the experimenter was well aware. However, the focus in this study was not on the simple fact of choice, but on the conceptual changes which produce these choices. The measures of these conceptual changes were scored after the study was completed so that the experimenter could not have known consciously or otherwise at the time which subjects to influence to choose the negative event and which not to. It seems clearly impossible to explain the results in these terms then.

There may be other possible explanations, particularly for parts of these findings, but no alternative seems to encompass all of them as comfortably as that which generated the study in the first place. It appears that the "irrational" decisions to perform a disgusting or painful action were guided by the prior, in many senses even more irrational, ways in which people had attempted to make sense of a situation which, in fact, made no sense. That is, the subjects could not deal with the fact that chance and chance alone had led them into an extremely unpleasant situation. Even though they had been told that a random number table had selected them for the negative rather than the neutral condition, they still "made sense" of this impending unpleasantness. Although it is superficially striking to observe people choosing to eat a worm, the more impressive aspect of these

findings is the degree to which people will change their conceptual system to make sense of the random events of their lives.

This is not meant to imply that they made these changes intentionally, or even that they realized how they had changed. In fact, in no case did any subject reveal any awareness of the kinds of changes in his view of things that had, in fact, taken place. A more common response was to deny them stoutly. In this respect these observations closely parallel what seems to take place during the attitude "change" that occurs following counterattitudinal behavior. Subjects do not seem to be aware that any change has taken place at all nor that there is any discrepancy between their behavior and previous attitudes (Bem & McConnell, 1970; Berglas, Note 1). In short, the subjects in this study were making major changes in their beliefs about themselves or some aspect of their world, without realizing that such changes were occurring and then, worse yet, acting on these new conceptions. We must, it would seem, question the appearance of continuity and consistency which all of us experience about our lives, since it would seem that this may be as likely to have been constructed after the fact as to have been what actually happened.

One point that should not be overlooked here is that some of the subjects did not make this "attribution error" and subsequently also did not choose to suffer. It may be these are simply the more sensible people, but perhaps they just do not get involved in the experiment in quite the right way. At this juncture we have no way of knowing what distinguished those "sensible" subjects from the others and whether they were really more sensible.

The discussion thus far has implicitly assumed that the particular reconceptualization strategies employed by the subjects were exemplars of a general style of "making sense" of the world. Of course, this is in no way justified by these data, which do not provide the necessary sampling of reconceptualizations. However, there is at least one piece of data that does support, albeit not conclusively, the notion that these are general styles. This is the relationship found between whether subjects reconstrued themselves or

the worm and their scores on the Locus of Causal Attribution Scale. The Locus of Causal Attribution Scale has previously been found (Laird & Berglas, in press) to relate to consistent stable differences in how people respond to a forced-compliance situation. Thus, there is some justification for believing that the Locus of Causal Attribution Scale does measure enduring differences in the way people organize their understanding of the behavior of persons, both others and themselves. Since this kind of variation is also consistent with the relationship observed here, it seems reasonable to conclude at least tentatively that people may well differ consistently in whether they make sense of the adversities that befall them in terms of their own attributes or those of the adversity.

Finally, it is not clear to what extent we might expect to see the particular strategies of conceptualization that were observed here in operation in real life. We have probably all encountered, in both ourselves and others, the tendencies to take credit in some way for outcomes which "really" happened by chance or to decide that the bad things that befall us may be all for the good somehow. It seems much more improbable that we should decide to derogate ourselves because we have fallen on difficult times. However, in fact, precisely that kind of behavior seems to be characteristic of those people who are labeled "depressed." Beck (1967) has pointed out that depressed individuals blame and dislike themselves for the widest variety of events. Similarly, it is not uncommon to observe that some people suffering terminal illnesses or other catastrophes increase their sufferings by their feeling that they "must have done something wrong to deserve this."

In short, then, this study seems to have demonstrated that the previously observed but not at all clearly understood effects of "expecting to suffer" were due to the subjects' attempts to justify to themselves this anticipated suffering. To the extent that we can generalize to the world at large, this study suggests that much of the apparent stoicism of the world's victims may be due to their reconstruction of their views of themselves and the world, so that their sufferings are seen as either not so bad or no more than appropri-

ate for people such as themselves. As a short-term solution to their immediate problems, such reconstructions are obviously helpful and might be described as simply "cooperating with the inevitable." However, if that suffering becomes no longer inevitable, then the results of this study must make us wonder if these adaptations themselves may now become impediments to the amelioration of the suffering.

REFERENCE NOTE

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