

Self-Efficacy Determinants of Anticipated Fears and Calamities

Albert Bandura
Stanford University

This comment analyzes the issues raised by Kirsch regarding the role of self-percepts of coping efficacy in avoidance behavior. Evidence is reviewed that shows that people who perceive themselves as inefficacious in wielding control over potentially aversive events view them anxiously, conjure up possible injurious consequences, and display phobic avoidance of them. Self-efficacy theory postulates an interactive, though asymmetric, relation between perceived self-efficacy and fear arousal, with self-judged efficacy exerting the greater impact. This enables people to perform activities at lower strengths of self-judged efficacy despite fear arousal and to take self-protective action without having to wait for fear arousal to prompt them to action.

In a recent article, Kirsch (1982) reported that college students who say they fear snakes raise their confidence that they could hold one if offered such hypothetical incentives as money ranging up to \$1 million, saving someone's life, or even sparing one's own life. In contrast, a majority of these same students steadfastly maintain they could not toss a wad of paper into a wastepaper basket at an easy distance (54%) or at a distance of 50 feet (15.2 m; 76%) even if a million dollars, their own life, or the lives of others depended on it. When asked for their reasons for their hypothetical reluctance in these hypothetical situations, the reluctant snake handlers said they were deterred by expected fear and aversive consequences, whereas the reluctant paper throwers said they were immobilized by want of ability.

Kirsch concluded from these data that people refrain from performing tasks they find threatening "due to expected negative consequences, including the expectation that they will experience fear" (p. 133). This type of interpretation simply begs the question because the causes of expected negative consequences and fear arousal themselves need explaining. This is one of a number of issues that the self-efficacy formulation addresses. People who doubt they can cope effectively with potentially aversive situations approach

them anxiously and conjure up possible injurious consequences. The self-efficacy determinants of outcome expectancies and apprehensions are discussed briefly next.

Disjoined Outcome Expectancies

In transactions with the environment, outcomes do not occur as events disjoined from actions. Rather, how one behaves largely determines the outcomes one experiences. Hence, performances that differ in adequateness beget different effects. Indeed, even small performance variations can produce markedly different consequences, as when a swerve on a mountain road sends a car careening down a ravine. Similarly, the type of outcomes people expect depend largely on their judgments of how well they will be able to perform in given situations. Thus, drivers who distrust their skill in navigating twisting mountain roads will conjure up outcomes of wreckage and bodily injury, whereas those who are fully confident of their driving capabilities will anticipate sweeping vistas rather than tangled wreckage. For activities in which outcomes are either inherent to the actions or are linked through socially structured contingencies, expected consequences are heavily rooted in judgments of performance efficacy. In acknowledging only the end point of the multilinked judgment, Kirsch disjoins outcome expectations from the very performance efficacy expectations on which they are conditional. People think contingently rather than believe that how skillfully they

Requests for reprints should be sent to Albert Bandura, Department of Psychology, Building 420 Jordan Hall, Stanford University, Stanford, California 94305.

perform has no effect on the types of outcomes they will experience.

Self-Efficacy Determinants of Anticipatory Fear

Kirsch invokes anticipatory fear as a regulator of avoidance behavior. However, he fails to explain the source of the fearful anticipations, nor does he address the large body of evidence disputing the view that fear controls avoidant action.

The notion that fear regulates avoidance behavior has been extensively tested and found seriously wanting (Bolles, 1975; Herrnstein, 1969; Schwartz, 1978). Avoidance behavior is frequently performed in the absence of fear arousal and can persist long after fear of threats has been eliminated (Black, 1965; Notterman, Schoenfeld, & Bersh, 1952; Rescorla & Solomon, 1967). Assessments conducted during the course of treatment of phobic disorders reveal no consistent relations between changes in fear arousal and phobic behavior. Elimination of phobic behavior can be preceded by increases, reductions, or no change in fear arousal (Barlow, Leitenberg, Agras, & Wincze, 1969; Leitenberg, Agras, Butz, & Wincze, 1971). Neither the pattern nor the magnitude of change in fear arousal accompanying treatment correlates significantly with changes in avoidance behavior (O'Brien & Borkovec, 1977; Orenstein & Carr, 1975; Schroeder & Rich, 1976). Although there is little evidence that fear controls avoidance behavior, the cause of anticipatory fear is an issue of interest in its own right.

Self-efficacy theory posits that it is mainly perceived inefficacy in coping with potentially aversive events that makes them fearsome. If people believe they can exercise control over the occurrence of events that can be injurious, they do not fear them. That perceived control does indeed reduce anticipatory and performance fear of aversive stimuli has been abundantly documented by diverse lines of research (Averill, 1973; Lazarus, 1980; Miller, 1979, 1981). People led to believe that they can exercise some control over painful stimuli display less autonomic arousal and impairment in performance than do those who believe they lack personal control,

even though both groups are subjected to the same painful stimulation. Evidence that the same aversive stimuli produce differential fear arousal depending on misbeliefs about controlling efficacy bears testimony for the power of self-belief rather than for a conditioned-anxiety view. Wortman and her associates (Wortman, Panciera, Shusterman, & Hibscher, 1976) have similarly shown that repeated failures create stress reactions when ascribed to personal inefficacy, but the same painful experiences leave people unperturbed if ascribed to situational factors.

The relation between self-percepts of coping efficacy and fear has now been tested directly in several lines of research with severe phobics (Bandura & Adams, 1977; Bandura, Adams, & Beyer, 1977; Bandura, Adams, Hardy, & Howells, 1980). In these experiments the intensity of fear is analyzed as a function of the strength of perceived self-efficacy in coping with different threats. The findings consistently show that phobics experience high anticipatory and performance fear on tasks on which they perceive themselves to be inefficacious, but as the strength of their self-percepts of efficacy increases, their fear declines. Kirsch replicated this now well-established relation for reported fear with regard to hypothetical performances.

The generality of the perceived inefficacy-fear relation is further confirmed in research using physiological indexes of fear (Bandura, Reese, & Adams, 1982). Phobics display no visceral arousal while performing coping tasks they regard with utmost self-efficaciousness. However, on tasks about which they doubt their coping efficacy, their heart rate accelerates and their blood pressure rises during anticipation and performance of the activities. After self-percepts of coping efficacy are strengthened to maximal levels, these same activities are executed without any visceral agitation.

Research in which anticipatory and performance fear toward the same threat are measured after self-perceived efficacy is systematically raised to differential levels further shows that perceived coping inefficacy is conducive to fear arousal (Bandura et al., 1982). Regardless of whether self-percepts of efficacy are increased enactively or vicariously—or whether the analysis involves dif-

ferential levels of perceived self-efficacy across groups or within the same subjects—the less efficacious subjects judge themselves to be, the more fear they experience when they later perform the threatening task.

Telch (Note 1) tested the comparative predictiveness of perceived coping efficacy and different indexes of anxiety with treated agoraphobics. Perceived self-efficacy proved to be a good predictor of different facets of psychological change—it predicted anticipatory fear, performance attainments in the behavioral posttreatment assessment, and self-initiated behavioral venturesomeness in the natural milieu. In contrast, the anxiety indexes lacked consistent predictive value. Anticipatory fear was related to behavior in the posttest but not in the natural milieu. Autonomic arousal in the posttest yielded only one correlate and that in a direction suggesting that self-percepts override arousal in the regulation of action. The more physiologically perturbed the persons have been the more they ventured outdoors. Leland (Note 2) examined by multiple regression many potential determinants of precompetition anxiety in young athletes. Perceived self-efficacy emerged as the major predictor, accounting for 40% of the variance in precontest anxiety, whereas a measure of anxiety proneness accounted for only 6% of the variance. Beck and Lund (1981) studied the persuasiveness of health communications in which the seriousness of periodontal disease and susceptibility to it were varied. Perceived self-efficacy in implementing health practices predicts who will adopt them, whereas level of fear arousal does not.

Asymmetric Interactive Relation

Self-efficacy theory postulates an interactive, though asymmetric, relation between perceived self-efficacy and fear arousal, with self-judged efficacy exercising the greater impact. People who judge themselves to be inefficient in managing potential threats approach such situations anxiously, and the experience of disruptive arousal, in turn, lowers their sense of efficacy that they will be able to perform skillfully.

In the self-appraisal of efficacy, past accomplishments and social comparative evaluation carry the greater weight because these

sources of efficacy information are considerably more trustworthy indicants of capability than are the indefinite stirrings of the viscera. People are therefore much more likely to act on their self-percepts of efficacy inferred from multiple sources than primarily on visceral cues. Given a sufficient level of perceived self-efficacy to venture threatening tasks, phobics perform them with varying amounts of fear arousal depending on the strength of their self-percepts. By considering the level, strength, and generality of self-percepts of efficacy, one can predict not only which threatening tasks subjects will perform but also how much anticipatory and performance fear they will experience in the process (Bandura et al., 1980; Bandura et al., 1982).

Substantial benefits accrue from the fact that actions are not directly controlled by fear independently of self-percepts of efficacy. People have fearful anticipations about many of the things they do in their life pursuits that fall at the lower limits of their self-judged efficacy. If fear arousal routinely triggered immobility or avoidance action, human functioning would be severely constricted. It is because people can perform activities at weaker strengths of perceived efficacy despite trepidations that they are able to overcome inappropriate fears and function effectively even in the face of considerable stress arising from realistic threats.

Truncated Inquiry

Kirsch presents questionnaire ratings and quotations to show that students are deterred from any commerce with snakes by the fear and the anticipated negative consequences that could occur were they to attempt the interactive behavior. In considering threatening prospective actions, the amount of fear and injurious effects people envisage depends, as we have seen, on how much control they judge they will be able to wield over the threats. Negative outcome expectancies reflect the causal dependencies postulated by self-efficacy theory.

Preliminary study in which snake phobics verbalize aloud their thoughts while attempting to cope with a snake reveals that their fearful anticipations and cognized injuries are indeed rooted in self-percepts of coping inefficacy. They believe that their inept cop-

ing efforts will cause the snake to strike ("I may squeeze him too hard and provoke him." "Oh my god, if I drop its head it is going to be annoyed and suddenly bite."). They promptly abort actions they have undertaken when they find they do not know how to control the writhing beast in their hands ("I don't know how to do it, sort of like holding a baby; I don't know how because he keeps squirming like a worm."). Sometimes they are reluctant to try actions because they view the threat as unpredictable and, hence, would be unable to use their self-protective skills ("It can take you by surprise with those slithering unpredictable movements."). The most profound self-inefficacy involves perceived vulnerability to total loss of personal control rather than self-doubts about particular coping performances ("As I get closer to the cage I feel the tension spread to my hands and shoulders. If I picked him up, I'd lose control of my hands and arms and drop him."). The loss of personal control, they believe, would then leave them defenseless. Gaining coping efficacy not only eliminates fear but even alters how the attributes of the phobic object are perceived ("Now that I know how to handle it, it doesn't look all that horrible.").

The prevalence of self-inefficacy thinking in phobic disorders is further revealed by Rappoport and Williams (Note 3). They recorded, via a portable electronic device, ongoing thoughts of agoraphobics as they coped with threats in natural milieus. Self-appraisals of coping capabilities, and reappraisals as situational circumstances changed, figured prominently in the persons' thinking as they took on, or shied away from, the situations confronting them. In these coping encounters they gave relatively little thought to negative outcomes. If self-percepts foster actions judged to be relatively safe, there is little need to dwell on catastrophic outcomes. In two studies conducted by Lee (in press, Note 4)—one involving snake handling and the other assertiveness—perceived self-efficaciousness predicted performance much better than did expected outcomes. Regression analyses reveal that when the effect of perceived self-efficacy is partialled out, expected outcomes do not add much to the prediction of behavior.

In brief, phobics envisage the outcomes arising from transactions with threats as very

much dependent on their perceived coping efficacy. Operating behind fears and cognized negative outcomes are self-judged inefficacies to exercise control over potentially threatening situations. Failure to explore why subjects fear that mishaps will befall them should they venture into coping activities presents a truncated analysis of the personal determinants of avoidance behavior.

Perceived Self-Efficacy: Generative Capability Rather Than Fixed Property

Perceived self-efficacy is concerned with people's judgments of how well they can organize and execute constituent cognitive, social, and behavioral skills in dealing with prospective situations. Operative self-efficacy is neither a static nor a fixed behavioral property that one does or does not have in one's repertoire any more than one would view linguistic efficacy in terms of a collection of sentences in a verbal repertoire. There is a marked difference between possessing constituent skills and being able to use them well under diverse circumstances. For this reason, people with similar constituent skills, or the same individuals on different occasions, may perform poorly, adequately, or extraordinarily (Langer, 1979; Weinberg, Gould, & Jackson, 1979; Collins, Note 5). Variable performance attainments with comparable or identical subskills are partly mediated by self-percepts of efficacy (Bandura, 1982). In short, perceived self-efficacy is concerned not with what one has, but with judgments of what one can do with what one has. If, by dwelling on their presumed coping deficiencies, people scare themselves to the point at which they believe they will be even less able than ordinarily to perform adequately, they will register lowered perceived self-efficacy.

Because operative self-efficacy is conceptualized as a generative capability, self-percepts of efficacy are measured in terms of variable use of constituent skills under circumstances that differ in complexity, difficulty, or threat. Thus, for example, in gauging driving self-efficacy the issue is not whether drivers know they can steer, accelerate, and slow down a car but whether they judge they can use these skills effectively to navigate through busy arterial roads, congested city traffic, onrushing freeway traffic, and twisting mountain roads.

In reasoning that phobics know they possess in their "behavioral repertoire" the "series of motor responses" needed to perform effectively, Kirsch embraces the type of mechanical-entity view of operative efficacy that self-efficacy theory rejects. To return to the reptilian example, snake phobics judge not whether their behavioral repertoire contains grasping motor responses but whether they can muster whatever skills they possess to cope with a mobile reptile in increasingly closer contacts.

According to Kirsch, coping with a shifty reptile involves no skill, but tossing a wad of paper into a wastepaper basket does. Herpetologists who know how to handle poisonous snakes and therapists who minister to self-doubting phobics testify to the fact that it takes some skill to control a snake. Indeed, recent research discloses that perceived coping efficacy can be promptly raised with subsequent reductions in fear and phobic behavior by explicitly modeling effective strategies for controlling phobic objects, which observers later put to good use (Bandura et al., 1982).

Social persuasion serves as one, though far from the best, means of raising people's beliefs concerning their operative capabilities (Bandura, 1977; Biran & Wilson, 1981). It is not entirely surprising that the prospect of vast sums of money could persuade students that they might be able to boost their coping facility through extraordinary effort, especially because they would not be called on to perform the tasks anyway. When big stakes are involved, it is not uncommon for people to psych themselves up with inflated judgments of their self-efficacy. The pretend incentives even persuaded many of the paper throwers that they too could marshal sufficient dexterity to hit a wastepaper basket at a distance. Not only is perceived self-efficacy subject to persuasory boosts but most inefficacious people would be quite willing to risk or even endure some injury for a hefty bankroll. There are countless things people would judge they could do, however ineptly, for a large sum of money or to spare human life.

When snake phobics selected through behavioral tests rather than verbal reports are offered real money to cope with real snakes, they do not change their behavior (Rimm & Mahoney, 1969). However, snake phobics

need not despair that fortunes would be needed to raise their self-percepts of efficacy to the point at which they could master their reptilian nemesis. A mastery modeling treatment (Bandura, 1982), that conveys dependable coping strategies can, in short order, instate robust self-percepts of coping efficacy that wipe out anticipatory fear, phobic thinking, and phobic behavior without requiring any offers of currency or physical salvation.

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