which are caused by signs of progress early in a course of therapy.

In the history of psychotherapy research, the expectancy construct emerged prematurely and without the empirical support necessary to establish its validity (Wilkins, 1973). In the absence of validating empirical evidence, subjective expectancies remain interesting epiphenomena, rather than valid, causal mechanisms of placebo responses and fear reduction.

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Fearful Expectations and Avoidant Actions as Coeffects of Perceived Self-Inefficacy

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The belief that fear controls avoidance behavior dies hard, despite growing evidence to the contrary. In a recent article, Kirsch (November, 1985) argued in favor of this view in his comments regarding the role of perceived self-efficacy in phobic dysfunctions. According to Kirsch, people take avoidant action because of expected fear. A large body of evidence disputes the notion that anticipatory fear regulates avoidant action (Bandura, 1986; Bolles, 1975; Herrnstein, 1969; Schwartz, 1978). Such behavior is often performed without anticipatory fear arousal, and avoidance can persist long after fear of threats has been eliminated (Black, 1965; Rescorla & Solomon, 1967). No consistent relations have been found between changes in fear arousal and phobic behavior during the course of treatment. 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 consistently with changes in avoidance behavior (O'Brien & Borkovec, 1977; Orenstein & Carr, 1975; Schroeder & Rich, 1976). In short, there is little empirical support for the proposition that avoidance behavior is controlled by fear. Kirsch never addressed the issue of how the paler expectation of fear could control behavior when the anticipatory actual experience of fear does not.

To attribute avoidance behavior to expected fear simply begs the question because the source of fearful expectations

still needs explaining. Kirsch did not indicate where they come from. He cited speculations that "self-observed habituation" during exposure to threats may reduce fearful expectations. As a source of fearful expectations, an interpretation relying on habituation is seriously wanting because visceral arousal provides rather limited and nondescript information for appraising coping capabilities and the formidableness of threats. As a mechanism of change, the described process of habituation makes fearful expectations an effect rather than a cause.

Self-efficacy theory (Bandura, 1977, 1986) posits that it is mainly perceived inefficacy in coping with potential aversive events that gives rise to both fearful expectations and avoidance behavior. People who judge themselves as efficacious in managing potential threats neither fear nor shun them. In contrast, if people judge themselves as inefficacious in exercising control over potential threats, they view threats anxiously, conjure up possible calamities were they to have any commerce with them, and avoid them. This is graphically revealed when phobics verbalize aloud their thoughts while attempting to cope with phobic threats (Bandura, 1983). They believe that their inept coping efforts will provoke adverse reactions. They promptly abort interactions they have initiated when they do not know how to deal with unpredictable situations that ensue. They are reluctant to attempt tasks they might be able to handle because they believe the encounter will escalate to a level that will exceed their coping capabilities. The most profound level of personal inefficacy involves perceived vulnerability to total loss of personal control, which they believe will leave them defenseless.

Behind these expected fears and calamities lie judgments of personal inefficacy to cope with potential threats. Fearful expectations and avoidance behavior are thus largely coeffects of perceived coping inefficacy. Because human behavior is extensively regulated by judgments of personal efficacy, people can perform activities at lower strengths of self-judged efficacy despite high fear arousal and can take self-protective action without having to wait for expectations of fear to impel them to action. However aversive the anticipatory arousal might be, it does not deter actors from strutting on stage, relief pitchers from venturing on baseball mounds, and students from taking intimidating examinations.

Kirsch reasoned that because perceived self-inefficacy in coping with phobic objects and anticipated fear correlate positively with each other and with avoidance behavior, they must be measuring the same thing, namely fear. Neither the conclusion of equivalence, nor conferring priority to fear necessarily follows from such correlations. For example, in a school population, age and height are highly correlated with each other and both may correlate with a third factor, but one would hardly conclude from such evidence that indexes of age and height measure the same construct.

Williams and his colleagues (Williams, Dooseman, & Kleifield, 1984; Williams, Turner, & Peer, 1985) have analyzed by partial correlation several data sets from experiments in which perceived self-efficacy, anticipated fear, and phobic behavior were measured. Perceived self-efficacy retains its predictiveness of phobic behavior when anticipated fear is partialed out, whereas the relationship between anticipated fear and phobic behavior essentially disappears when perceived self-efficacy is partialed out. Contrary to what Kirsch claimed, perceived self-efficacy and anticipated fear are not measuring the same thing. When the related variable is controlled, perceived self-efficacy accounts for a significant amount of variance in phobic behavior; anticipated fear does not. The variance contribution of perceived self-efficacy may be reduced in pretreatment assessments if the analyses are confined only to the severest cases, which markedly curtails the range of self-efficacy scores. The predictive superiority of perceived self-efficacy over anticipated fear is further corroborated in other studies examining avoidance behavior (Hackett & Betz, 1984; Williams & Watson, 1985).

Kirsch's conclusions concerning the implications of social inducements on self-judged efficacy rest on a mistaken premise. He seems to assume that if one can boost people's beliefs in their efficacy by the prospect of escalated benefits, this somehow challenges the status of self-efficacy measures in phobic domains of functioning, as though self-efficacy judgments are authentic only if unalterable by social influences. In point of fact, judgment of personal efficacy is not an immutable entity reflecting a fixed faculty of the organism. Self-efficacy judgments are changeable through cognitive processing of four major classes of influences: direct mastery experience, social comparison through vicarious experience, social persuasion and allied types of social influences, and inferences from physiological states.

Kirsch conducted a study in which college students who said they feared snakes were offered hypothetical inducements. These included money ranging up to a million dollars, saving someone's life, or sparing one's own life in an effort to persuade the students that they could handle a snake or toss a wad of paper into a distant wastepaper basket. The hypothetical inducements significantly boosted efficacy judgments for both snake handling and paper throwing. As the inducements were raised, eventually all the students persuaded themselves that they could handle a snake, and many of them similarly persuaded themselves that they could marshal sufficient dexterity to hit a wastepaper basket at some distance (46%), or at 50 feet (25%). Kirsch concluded that self-efficacy judgments regarding shifty snakes reflect expected fear rather than skill.

The results of this hypothetical exercise have little bearing on the nature of perceived self-efficacy. Self-efficacy scales do not measure skill; they measure what people believe they can do under varied circumstances, whatever skills they possess or the particular skills required by the task. People's attainments are partly determined by their beliefs about how well they will be able to orchestrate their existing subskills, how much effort they will be able to mobilize, and how long they will be able to persevere in their attempts (Bandura, 1986). The same capability can, therefore, give rise to performances that are subpar, ordinary, or extraordinary depending on self-judged efficacy. Judgments of operative self-efficacy are thus not concerned with the skills one possesses but with beliefs about how well one can utilize those subskills in dealing with continuously changing realities, most of which contain ambiguous, unpredictable, and stressful elements. If Kirsch wished to conceptualize a self-efficacy judgment as an unalterable reflection of a fixed skill, then that should be regarded as his conception to defend, rather than burdening self-efficacy theory with such a view.

Kirsch makes much of the fact that the students were more readily self-persuaded about coping with a reptile than about tossing a wad of paper into a small remote target. There is little of conceptual import here, merely that it is difficult to convince people they can execute a performance with little margin of error on a task set at, or near, a physically unattainable limit. Evidence that increasing inducements raise self-efficacy judgments when the task becomes more do-able poses interpretive problems for advocates of a fixed entity view of perceived self-efficacy. As for the shifty reptile, the data unsurprisingly show that escalating benefits can raise efficacy judgments on hypothetical tasks among subjects selected by a self-report criterion with known deficiencies

to identify the types of severe phobics used in self-efficacy research. Severe phobics harbor a stubborn distrust of their coping efficacy, which even real money fails to dislodge in real situations (Rimm & Mahoney, 1969). However, therapists need not despair that massive monetary inducements might be required to raise the perceived self-efficacy of severe phobics to the point at which they can get themselves to do the things needed to master their debility. Treatments that enhance perceived self-efficacy by conveying coping strategies rapidly eliminate phobic thinking and dysfunctions without the need to resort to any monetary persuasion (Bandura, 1982).

As previously noted, self-efficacy theory regards social persuasion as one means to raise people's beliefs concerning their operative capabilities. Showing that the prospect of large benefits can lead students to persuade themselves that they might be able to mount an extraordinary coping effort, especially an effort they need not actually perform, corroborates predictions from self-efficacy theory that judgments of efficacy can be influenced by social persuasion. In their life pursuits, countless young athletes convince themselves, goaded by the prospect of fame and fortune, into believing they can make it into the professional ranks. For the vast majority, the self-persuasion is ill-founded, yet it sustains long hours of grueling practice under miserable conditions for years on end. Except for attainments that clearly exceed human capacity, there are numerous difficult things people can persuade themselves that they could conceivably do for prized benefits.

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Response Expectancy and Phobic Anxiety: A Reply To Wilkins and Bandura

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Wilkins (this issue, pp. 1387–1389) argues that the therapeutic effects of "placebo" control procedures are not mediated by expectancy, proposing instead that expectancy changes are epiphenomena caused by subjects' observation of their improvement. Consideration of the procedures used as expectancy controls renders Wilkins's hypothesis implausible. Changes generated by control treatments cannot be due to self-observed improvement because those treatments generally do not provide an opportunity for subjects to observe their improvement. Nor do they teach phobic subjects the coping skills that Bandura believes they lack.

Although they share little else in common, control procedures generate expectancies for reduced fear. Relatively unpersuasive procedures reduce fear as effectively as traditional psychotherapy (Paul, 1966), and more credible procedures can be as effective as systematic desensitization (SD). Expected improvement, assessed prior to treatment, is highly correlated with subsequent fear reduction (Kirsch, Tennen, Wickless, Saccone, & Cody, 1983), and the effectiveness of various treatments can be predicted by their credibility (Shapiro, 1981). The fact that expectancy ratings are correlated with self-report, behavioral, and physiological measures of fear (sometimes more highly than these measures are correlated with each other) is evidence of their validity (Emmelkamp, 1982). In the absence of a plausible alternative, the most parsimonious explanation of these data is that phobic anxiety can be reduced by expectancy change, which is at least one factor contributing to the effectiveness of various treatments (cf. Wilkins, 1971).

Response expectancy is not the only factor affecting nonvolitional responses, nor need it be the sole active mechanism of any particular treatment procedure. Nevertheless, the hypothesis that expectancy modification is the mechanism of SD provides the parsimonious explanation of the relevant data. Wilkins correctly notes my error in including Slutsky and Allen (1978) and McGlynn (1971), rather than Allen (1971), Maleski (1971), and Marks, Gelder, and Edwards (1968), in my list of studies supporting this proposition. He cites two additional studies that are relevant to this issue (Holroyd, 1976; McReynolds & Grizzard, 1971), but fails to note that they also reported equivalent effects for SD and expectancy controls. Thus my claim of 11 supportive studies stands corrected at 13 or 14, depending on one's interpretation of Marcia, Rubin, and Efran (1969).

Wilkins charges that I omitted studies demonstrating the superiority of therapy to control procedures. However, SD was not found to be more effective than control procedures in any of these studies. Because