

## THE ASSESSMENT AND PREDICTIVE GENERALITY OF SELF-PERCEPTS OF EFFICACY

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**Summary**—This article corrects Tryon's misunderstanding of how self-efficacy is measured. Research bearing on the effects of social demands on efficacy-action congruence and on the predictive generality of self-percepts of efficacy is also briefly reviewed.

In a recent article in this journal, Tryon (1981) raises anew the issue of whether "social demand" might increase congruence between self-percepts of efficacy and behavior. Having raised the issue, Tryon surprisingly fails to cite any of the published research designed to assess what effect, if any, elements of social demand might have on the degree of relationship between self-percepts of efficacy and action.

The methodological claim of social demand has, in fact, already been mined empirically many times with paltry yields. Before discussing this body of evidence, I should like to correct Tryon's misunderstanding of how perceived self-efficacy is measured. Contrary to his statement, individuals are not asked "whether or not he would actually perform" the activities included in the performance test. Rather, people are asked to judge whether or not they are capable of performing various activities. Judgments of capability differ significantly from assertions of performance intentions.

If judgments are made publicly under conditions that needlessly arouse evaluative concerns, such assessment procedures might either distort the self-judgments or affect actions if they are easily susceptible to voluntary control. In order to minimize possible reactive effects of the

microanalytic assessment itself (Bandura, 1977), self-efficacy judgments are recorded privately, rather than stated publicly. Treatments and assessments are conducted in different places by different persons. Moreover, judgments of level and strength of self-efficacy are made for a variety of activities involving familiar and unfamiliar objects in advance of performance tests, rather than each judgment being made immediately prior to each performance task. And finally, instructions emphasize the importance of frank judgments. Phobics, whose lives have for years been severely impaired are interested in regaining their coping capabilities, which are not easily willed. They try to do as much as they can rather than play congruence games.

The predictive value of self-efficacy judgments has now been established under a variety of assessment arrangements. Consider some examples. Perceived self-efficacy predicts performance when these two factors are measured in different places by different assessors (Bandura, Reese and Adams, 1982). People's perceptions of their coping self-efficacy predict the level of their cardiac acceleration and blood pressure on stressful tasks (Bandura, Reese and Adams, 1982). In investigations of this type, which involve markedly different modalities, the

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judgment concerns coping action and the effect involves physiological arousal. In studies designed to elucidate relapse processes, self-percepts of efficacy, measured after everyone achieves maximal performance in treatment, predict the likelihood of relapse months later (DiClemente, 1981; McIntyre, Mermelstein and Lichtenstein, 1980). Indeed, microanalytic measures of perceived self-regulatory efficacy predict, not only who is likely to relapse, but also how soon they will relapse, and even the specific situations in which they will experience their first slip (Conditte and Lichtenstein, 1981). In pianists treated for stage fright, perceived coping self-efficacy at the completion of treatment predicts how well they perform in concerts given on future occasions in varied naturalistic settings (Kendrick, *et. al.*, 1982). The image Tryon conjures up of "authority figures" instructing subjects to declare what they *actually will do* and hovering intrusively and evaluatively over their self-appraisals and subsequent performances misstates how research on self-efficacy is in fact conducted.

High perceived self-efficacy has differential effects on preparatory and coping effort in that self-doubts create an impetus for learning but hinder adept execution of established skills. In applying acquired skills, strong self-efficaciousness intensifies and sustains the effort needed for optimal performance, which is difficult to achieve if one is plagued by self-doubts. In approaching learning tasks, however, those who perceive themselves to be supremely self-efficacious in the undertaking see little need to invest much preparatory effort in it. Indeed, Salomon (1982) found that on learning tasks children believe to be difficult, the higher their perceived self-efficacy as a learner the more effort they invest and the higher are their academic attainments. In contrast, when the same instructional contents are presented in formats children believe to be easy, the higher their self-judged efficacy as learners, the less effort they invest in the task and the lower is their subsequent performance in tests of achievement. The latter findings illustrate both the intricate ways in which self-percepts of efficacy affect learning and the barrenness of the demand notion.

The question of whether self-efficacy probes, and the way in which they are made, affect performance has been addressed in several lines of research. If self-efficacy probes have reactive effects then they should produce at least some differences in performance. Results show that the level of performance and fear arousal are the same regardless of whether people do or do not make prior self-efficacy judgments (Bandura *et al.*, 1980; Brown and Inouye, 1978). It follows from the notion of social demand that judgments voiced publicly would create greater social pressures for consistency than would judgments made privately. Results show that neither people's performances nor the degree of relationship between self-efficacy judgment and action is affected by whether they make their self-efficacy judgments publicly or privately (Gauthier and Ladouceur, 1981; Weinberg, Yukelson and Jackson, 1980). It could be argued that private recording reduces evaluative concerns but does not eliminate them entirely. The experiment described next was designed to provide an even more decisive test of the possible effects of social demands on congruence.

The notion of social demands would predict closer congruence between efficacy judgment and action under high, rather than under low, evaluative surveillance. Findings show the opposite to be the case (Telch *et al.*, 1982). Phobics tested under conditions of low social demand judged their efficacy with full knowledge that their self-appraisals would not be seen by anyone. Since their self-efficacy judgments would remain unknown there was nothing for others to compare to create any social pressures for consistency. Subjects were told that the self-assessments were designed as private records of their progress in treatment so the experimenter had no desire to see the ratings. Upon completing their self-efficacy scales, they were instructed to tear them off the gummed pad of scales and place them in their purse or pocket for their own future reference. However, unbeknownst to the subjects, they left a record of their self-efficacy judgments on a nondistinguishable white carbon back copy. A post experimental interview revealed that not a

single subject entertained the possibility that the experimenter would ever see their ratings. In the condition of high social demand, subjects rated their self-efficacy with prior knowledge that the experimenter would examine their ratings. To add salience to the congruence evaluative set, subjects were instructed to hand their completed efficacy scales to the experimenter who inspected them closely and then administered the performance test.

Results of the preceding experiment yield no support for the view that social demands increase congruence between self-efficacy judgments and actions. On the contrary, congruence between perceived self-efficacy and performance declined when evaluative inspection was made salient. Under conditions of social surveillance people became overly conservative in their self-appraisals which created discordances between self-efficacy judgment and action. The high congruence between perceived self-efficacy and performance obtained under the low demand condition is similar to that typically found under the standard method of assessing self-efficacy. Veridical self-appraisal is thus best achieved under conditions that reduce social evaluative factors.

One can, of course, introduce social influences that dissuade people from acting on their self-percepts of efficacy. Tryon suggests telling participants that the theory that people always do what they say is "often wrong" and that the study is designed to test this alternative hypothesis. Such research would have little bearing on the standard method of gauging self-efficacy, which minimizes elements likely to arouse evaluative concerns and includes no suggestions of either concordance or discordance between self-judgment and action. Research that injects demands for discordance is not only of little relevance to the standard assessment methodology, but it impedes understanding of the customary relationship between self-referent thought and action. It is more fruitful to use tools for gauging self-referent thought in ways that advance understanding and prediction of human behavior than in ways that obscure matters and give rise to prediction failures by distorting self-

appraisals or actions.

Except for powerful enactive mastery treatments, different modes of treatment typically produce variable outcomes in persons treated by the same method either for the same length of time or to a terminal criterion. Previous efforts to explain and predict this notable variability in how much people will change has never met with all that much success. In contrast, microanalytic measures of perceived self-efficacy predict variations in the level of changes produced by different modes of treatment, variations among persons receiving the same type of treatment, and even variations within individuals as to the particular tasks they will master or fail (Bandura, 1977; Bandura *et al.*, 1980). Since valuation of predictive power is unlikely ever to go out of vogue in scientific enterprises, the field of psychological change can be well served by microanalytic measures that yield predictive success. There is not much call for unpredictable measures.

Tryon states that I interpreted positive findings as "*proving* (italics added) the validity of self-efficacy theory". I have never made such a rash claim, nor do I hold to such a naive view of scientific inquiry. Prediction successes add confidence in the validity of a theory but they can never "prove" it. Any theory can always be falsified under yet untested conditions. There exists a marked difference between interpreting prediction successes as lending validity to a theory and claiming it has been proven. Nor do I rest the explanatory and predictive utility of self-efficacy theory, as Tryon alleges, solely on demonstrations that self-percepts of efficacy often surpass terminal performance in treatment as predictors of future performance. It is understandable that a behavioral analyst might selectively attend only to studies in which self-percepts of efficacy are instated enactively because there is a behavior to hook onto. However, these are the least critical findings from the standpoint of demonstrating that self-percepts of efficacy function as proximal determinants of how people behave and the amount of stress they experience. Of vastly greater interest, and more challenging to theories contending that people cannot influence through

thought what they will do, are studies in which self-percepts of efficacy are altered through observational or symbolic means (Bandura, Adams and Beyer, 1977; Bandura *et al.*, 1980; Bandura, Reese and Adams, 1982; Biran and Wilson, 1981; Kazdin, 1979). In modeling and symbolic inductions, people do not execute any actions. Consequently, they have no behavioral data for forming generalized perceptions of their coping capabilities, nor is there any behavior from which to predict future performance. Changes in self-percepts of efficacy predict well subsequent level of performance.

With regard to the explanatory and predictive utility of self-efficacy theory, there now exists substantial evidence on this point. Perceived self-efficacy helps to account for such diverse phenomena as changes in different types of coping behavior produced by different modes of treatment (Bandura, 1982; Biran and Wilson, 1981; Kazdin, 1979; Kendrick *et al.*); patterns and level of physiological reactions to different threats (Bandura, Reese and Adams, 1982); self-regulation of refractory behavior over extended time spans (DiClemente, 1981; Conditte and Lichtenstein, 1981; McIntyre, Mermelstein and Lichtenstein, 1980); debilitating effects of illusory self-inefficaciousness (Weinberg, Gould and Jackson, 1979; Weinberg, Yukelson and Jackson, 1980); depression (Davis and Yates, 1982; Kanfev and Zeiss, Note 2); achievement strivings (Bandura and Schunk, 1981; Collins, Note 1; Schunk, 1981); and career choice and development (Betz and Hackett, 1981; Hackett, 1981). In these diverse lines of research predictive success is achieved across time, settings, performance variants, expressive modalities, and vastly different domains of psychological functioning.

Although self-efficacy judgments are functionally related to action, a number of factors can affect the strength of the relationship. Discrepancies may arise because of faulty self-knowledge, misjudgment of task requirements, unforeseen situational constraints on action, disincentives to act upon one's self-percepts of efficacy, ill-defined global measures of perceived

self-efficacy or inadequate assessments of performance, and new experiences that prompt reappraisals of self-efficacy in the time elapsing between probes of self-efficacy and action. Examination of these factors, as well as the operative processes in self-efficacy regulation of affect and action, will deepen our understanding of how self-referent thought affects human life.

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