

Social Demand for Consistency and Congruence Between Self-efficacy and Performance

MICHAEL J. TELCH

ALBERT BANDURA

Stanford University

PAUL VINCIGUERRA

ALISON AGRAS

University of the Pacific

ANNA L. STOUT

Duke University Medical Center

The present study tested the hypothesis that implied social demand increases congruence between self-efficacy judgments and performance. Snake phobics made self-efficacy judgments before and after participant modeling treatment under conditions of either low or high evaluative surveillance. Variations in social demand had no significant effects on avoidance behavior, self-efficacy judgments, or on reported fear arousal. Contrary to prediction, high social demand reduced the congruence between perceived self-efficacy and performance by prompting excessive conservatism in self-appraisal. Variations in social demand had no effect on congruence after a brief treatment experience. High social demand may encourage conservatism in self-appraisal only when ambiguity exists about the precise nature of the threat and the tasks to be performed.

Self-efficacy theory has been formulated as a unifying theory of behavioral change (Bandura, 1977). This theory posits that actions and emotional arousal in stressful situations are partly mediated through self-percepts of efficacy. Microanalyses conducted on different modes of influence and varied types of activities generally reveal high congruence between self-efficacy judgments and performance (Bandura & Adams,

The authors wish to thank Roger Katz and Joel Killen for their helpful suggestions throughout the course of the study. Requests for reprints should be sent to Albert Bandura, Department of Psychology, Stanford University, Building 420, Jordan Hall, Stanford, CA 94305.

1977; Bandura, Adams, & Beyer, 1977; Bandura, Adams, Hardy, & Howells, 1980; Bandura & Schunk, 1981; Conditte & Lichtenstein, 1981; Schunk, 1981; Weinberg, Gould, & Jackson, 1979). Causal tests in which perceived self-efficacy is induced to differential levels show that the higher the self-percepts of efficacy the higher are the performance accomplishments and the lower is the fear arousal (Bandura, Reese, & Adams, 1982).

In self-efficacy theory, self-referent thought is indexed in terms of particularized self-percepts of efficacy that vary across activities rather than as a global disposition. In gauging the relationship between perceived self-efficacy and action, persons designate on efficacy scales describing sets of tasks, those they judge they can do and their level of certainty. Degree of congruence between efficacy judgments and performance on corresponding tasks is then computed (Bandura, 1977). The question arises as to whether stating efficacy judgments might in itself affect performance. If such judgments are made publicly under conditions in which social evaluation is salient, the assessment procedures could raise evaluative concerns and perceived pressures for consistency. To minimize possible motivational effects of the microanalytic assessment, efficacy judgments are recorded privately without personal identification. Treatments and assessments are conducted in different settings by different persons. Moreover, judgments of level and strength of self-efficacy are made for a variety of activities in situations varying in difficulty and in advance of behavior tests, rather than immediately prior to each performance task. And finally, instructions emphasize the importance of frank judgments. Although the standard microanalytic procedure includes these various safeguards, nevertheless several writers have speculated that implied or assumed social demand for consistency may contribute to the level of congruence between self-efficacy judgments and performance (Borkovec, 1978; Kazdin, 1978; Poser, 1978). It is of interest to compare how congruence between self-efficacy and performance is affected if assessment procedures vary in the extent to which such safeguards are applied. In the present context, the term social demand refers to social pressures for consistency between stated judgments and action.

Considering the refractory nature of phobic behavior, simply verbalizing an efficacy judgment that may not fully reflect what a person believes will not necessarily produce bold performances. However, making self-efficacy judgments may contribute some motivational inducement to improve the match between judgment and performance. Several studies have been conducted to determine whether self-efficacy probes exert any influence. Research on the possible reactive effects of efficacy assessment reveals that performance and fear arousal are not affected by whether people do or do not make prior self-efficacy ratings (Bandura et al., 1980; Brown & Inouye, 1978). Also, performances are unaffected by whether people make their efficacy judgments privately or publicly (Gauthier & Ladouceur, 1981; Weinberg, Yukelson, & Jackson, 1980). While private recording may reduce evaluative concerns and consistency demands, it does not eliminate them entirely. To the extent that people assume their

private recordings will be evaluated at a later time they may retain some evaluative concerns.

A more decisive test of whether implied social demand for consistency affects congruence between efficacy judgments and action therefore requires arrangements wherein persons have full reason to believe that their self-efficacy judgments will not be seen by anyone. Since the efficacy judgments remain unknown there is nothing for others to compare, and, hence, there can be no social pressures for consistency. Such a condition was employed in the present experiment, as well as one in which social inspection of self-efficacy judgments and the prospect of evaluative comparison was made salient. Phobics made self-efficacy judgments before and after participant modeling treatment under conditions of either low or high evaluative surveillance. It was predicted that the degree of congruence between self-judged efficacy and subsequent performance would be greater under high than under low implied social demand.

METHOD

Subjects

Subjects whose lives were impaired by an extreme fear of snakes were recruited through announcements in the community media. Screening procedures were identical to those used by Bandura and his colleagues (Bandura & Adams, 1977; Bandura, Adams, & Beyer, 1977). Those whose fears were confirmed by a test of phobic behavior were chosen for study. Of the 17 subjects so selected, all but one were female. They ranged in age from 18 to 57 years with a mean of 30 years. All of these subjects reported on an initial screening questionnaire that they had restricted their outdoor activities because of their fear. Most of them (71%) also reported having recurrent nightmares about snakes.

Measures

The assessment procedure was the same as that used by Bandura et al. (1977). The multifaceted measures provided the data for a microanalysis of changes in self-efficacy and avoidance behavior.

Behavioral avoidance test. Subjects' avoidance behavior was measured through a series of 29 tasks requiring increasingly more threatening interactions with a 2-foot boa constrictor. The tasks required subjects to approach a glass cage containing the snake, to look down at it, to touch and hold it with gloved and bare hands, to let it loose in the room and return it to the cage, to hold it within 12 cm. of their faces, and finally to tolerate the snake crawling in their laps. Subjects were informed that they would not be forced to perform the tasks, but that they should complete as many as possible to provide an accurate measure of the severity of their fear. The assessor administered the test in a neutral manner offering neither encouragement nor support, and stood behind the subject to control for any possible influence of expressive cues. The avoidance score was the number of tasks subjects were able to perform

successfully. Subjects who could place their gloved hand in the cage for 30 sec during the pretest were considered insufficiently fearful and thus were excluded from the study.

Perceived self-efficacy. Subjects were provided with the list of 29 performance tasks included in the behavioral test and were asked to designate those they judged they could do as of then. For each task so designated, they rated the strength of their efficacy on a 100-point scale ranging, in 10-unit intervals, from high uncertainty, through intermediate values of certainty, to complete certainty. Self-efficacy judgments were measured before and after each behavioral test.

Fear arousal accompanying approach responses. The degree of fear or anxiety associated with each performance task was also assessed. On a 10-point scale, subjects rated orally the degree of fear they experienced while each approach task was described to them (anticipatory fear) and again while they were actually performing the corresponding task (performance fear). The latter fear rating was obtained 5 sec before the termination of each item. A measure of fear was calculated by averaging the fear ratings for the tasks completed.

Experimental Conditions

Subjects were randomly assigned to conditions designed to create either a low or a high social demand for consistency between self-appraisal and performance. In order to enhance demand effects, the same experimenter, either a male or female, administered all assessment and treatment procedures to a given subject. In addition to assessing degree of congruence between self-efficacy and performance at the pretest phase, it was also of interest to determine the effect of implied social demand on congruence after subjects had undergone a treatment experience. Following the pretest, subjects were administered the participant modeling treatment, whereupon their self-efficacy and their avoidance behavior were reassessed. The specific strategies of treatment are described at length elsewhere (Bandura, Jeffery, & Wright, 1974).

Low demand condition ($N = 8$). Subjects in the low demand condition were informed that the self-efficacy forms were provided for their own self-assessment and that the forms they completed before and after treatment would serve as private records of their progress in treatment. Subjects were told further that, for this reason, the experimenter had no desire to see their ratings. While each subject completed the efficacy scale, the experimenter sat at a desk at the opposite end of the room facing away from the subject to avoid any visual contact.

The self-efficacy scales were printed on specially designed white carbon sheets which made them indistinguishable from regular white sheets of paper. The sheets were arranged in a sequence of three white carbon back copies followed by one white carbon front copy that looked identical to the others. This sequence was repeated to form 25 sets of four sheets each which were combined into one gummed pad of 100 self-efficacy forms. Upon completing a self-efficacy form, subjects were told to tear

off the completed form and to place it in their purse or pocket for their own future reference. The thick pad was so designed that an imprint of the subjects' efficacy ratings was registered on the fourth page of the pad which subjects could not see. Unbeknownst to the subjects, they left a record of the self-efficacy judgments.

High demand condition ($N = 9$). In the high demand condition subjects rated their self-efficacy with full knowledge that the experimenter would examine their ratings. To add salience to the inspectional set, individual folders bearing each subject's name were prepared and prominently displayed. Subjects were told that the self-efficacy ratings would be used to evaluate progress in the mastery of fears. Subjects were instructed to hand their completed efficacy scale to the experimenter who then examined it and placed it in the marked folder.

At the completion of the experiment subjects in the low demand condition were interviewed to determine if they thought their self-efficacy ratings would be seen by the experimenter. The procedure of providing subjects sole private possession of their ratings proved most effective in eliminating any social evaluative concerns. Not a single subject entertained the possibility that the experimenter would ever see their ratings.

RESULTS

Table 1 presents the mean scores for the various measures under differential social demand at the two phases of the study.

A one-way analysis of variance was performed on scores obtained for each dependent measure at each of the two phases of the experiment to determine whether differential social demands had any effects. Results of the analyses disclosed no significant differences between groups on either approach behavior, level of self-efficacy, strength of self-efficacy, or on experienced fear arousal.

Level of Congruence

Congruence indices were computed by comparing self-efficacy judgments obtained prior to the behavioral test with the test performance. An efficacy rating at a strength value of 20 or higher was taken as a judgment of capability. The measure of congruence was obtained by recording whether subjects judged themselves capable of performing each of the various tasks and computing the percentage of accurate correspondence between self-efficacy judgments and actual performance.

The level of congruence between self-efficacy judgments and performance at pretreatment was substantially higher under low demand (79%) than under high demand (50%). This difference was highly significant $F(1,15) = 5.68, p < .03$. Inspection of the data on congruence revealed that almost all of the disparities between self-efficacy judgments and action were underestimates of performance (88%). However, the mean magnitude of underestimation was significantly greater in the high demand (43.2%) than in the low demand condition (18.6%), $t(15) = 2.18, p < .05$.

A similar microanalysis was conducted at the posttreatment phase us-

TABLE 1
MEANS AND STANDARD DEVIATIONS FOR THE DIFFERENT MEASURES UNDER
DIFFERENTIAL SOCIAL DEMAND AT THE TWO PHASES OF THE STUDY

Conditions	Level of self-efficacy		Approach behavior		Fear arousal		Self-efficacy performance congruence	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pretreatment phase								
Low social demand	7.3	5.5	9.2	5.4	5.2	2.7	79.4	26.1
High social demand	6.6	4.1	9.5	4.4	4.6	2.1	49.9	25.0
Posttreatment phase								
Low social demand	24.9	8.8	24.6	9.2	1.9	1.5	98	6.0
High social demand	23.0	7.7	23.5	7.6	2.0	1.4	97.6	4.5

ing the self-efficacy measure after treatment but before the behavioral posttest. This analysis yielded comparably high congruences between efficacy judgments and performance for both the low (98%) and the high (97%) demand conditions.

Changes Accompanying Treatment

Subjects in both demand conditions showed comparable improvement on all outcome measures following one session of participant modeling. The data were therefore pooled for analysis of therapeutic change. Mean performance increased from 32% of the tasks completed at pretest to 83% at the end of treatment, a gain that is highly significant, $t(16) = 9.71$, $p < .0001$. In this sample of subjects, 70.6% reached terminal performance before the 3-hour session time limit had expired. A corresponding increase in perceived self-efficacy for both level (from 24% to 83%) and strength (from 21% to 80%) was observed at the posttreatment assessment. These improvements in self-percepts of efficacy are highly significant for both level $t(16) = 9.22$, $p < .0001$ and strength $t(16) = 9.22$, $p < .0001$. Analysis of subjects' reported fear arousal accompanying approach responses also showed a significant reduction from a mean of 4.9 to 1.9 following participant modeling $t(16) = 4.32$, $p < .001$.

DISCUSSION

The results yielded no support for the hypothesis that implied social demands increase congruence between self-efficacy judgments and action. Making efficacy judgments under high or low evaluative inspection had no differential effect on performance or reported fear arousal. Contrary to expectation, congruence between perceived self-efficacy and performance decreased substantially when evaluative inspection was made salient. Subjects showed high congruence between their efficacy judgments and attainments when freed of social evaluative concerns, whereas

they displayed substantial mismatch between self-reported efficacy and performance when their consistency was subject to social surveillance and evaluation.

Previous research reveals that when people misjudge their self-efficacy they often overestimate their capabilities (Bandura, 1977; Bandura & Schunk, 1981; Schunk, 1981). In this study, however, the subjects who displayed the notable discordance between self-efficacy and action almost uniformly underestimated their performance capabilities. Apparently the effects of evaluative surveillance are to make people more conservative in their self-appraisals. If people's actions were governed by a drive for consistency, concordance under high social demand would have been easily achievable. Considering that self-appraisals were lower than actual performance, subjects had only to cease their coping efforts after their performance matched their self-judged efficacy. Instead, they took on additional mastery tasks, thus creating increasing discordance.

The standard method of assessing self-efficacy described earlier, which is designed to minimize evaluative concerns, bears closer resemblance to the low than to the high social demand procedure. It is noteworthy that the high congruence between self-efficacy and performance obtained under the low demand condition is similar to that typically found under the standard procedure. These findings shed light on the optimal conditions for assessing self-percepts of efficacy. Results of the present study suggest that veridical self-appraisal is best achieved under conditions that reduce the possible influence of social evaluative factors.

Discrepancies between self-efficacy judgments and performance can arise from a variety of sources (Bandura, 1982). They may reflect misjudgments of task requirements, unfamiliarity with the threats to be presented, unforeseen situational constraints on action, disincentives to act upon one's self-percepts of efficacy, and faulty self-knowledge. In the initial test, all subjects had to go on was brief reference to a snake without any further specification and capsule descriptions of the tasks. The coping experiences provided by treatments relying on enactive mastery go a long way toward clarifying task ambiguities and authenticating personal capabilities. Not surprisingly, congruence between self-efficacy and action was higher after the brief treatment experience than before.

Of further interest is the finding that variations in social demand exerted no effect on congruence following treatment. Although many subjects performed maximally at this phase, a number of them had room to err by overestimating their coping capabilities and all could err in the direction of overly cautious self-appraisals, as they had done in the pretreatment phase. The results suggest that evaluative concerns may encourage conservatism in self-appraisal mainly when some ambiguity exists about the precise nature of the threat and the tasks to be enacted. After people gain some information on these matters, they rely on their self-knowledge and do not let extraneous evaluative factors intrude on their self-appraisals. As a result their actions correspond closely to their stated self-percepts of efficacy.

REFERENCES

- Bandura, A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 1977, **89**, 191-215.
- Bandura, A. The self and mechanisms of agency. In J. Suls (Ed.), *Psychological perspectives on the self* (Vol. 1). Hillsdale, NJ: Erlbaum, 1982.
- Bandura, A., & Adams, N. E. Analysis of self-efficacy theory of behavioral change. *Cognitive Therapy and Research*, 1977, **1**, 287-310.
- Bandura, A., Adams, N. E., & Beyer, J. Cognitive processes mediating behavioral change. *Journal of Personality and Social Psychology*, 1977, **35**, 125-139.
- Bandura, A., Adams, N. E., Hardy, A. B., & Howells, G. N. Tests of the generality of self-efficacy theory. *Cognitive Therapy and Research*, 1980, **4**, 39-66.
- Bandura, A., Jeffery, R. W., & Wright, C. L. Efficacy of participant modeling as a function of response induction aids. *Journal of Abnormal Psychology*, 1974, **83**, 56-64.
- Bandura, A., Reese, L., & Adams, N. E. Microanalysis of action and fear arousal as a function of differential levels of perceived self-efficacy. *Journal of Personality and Social Psychology*, 1982, **43**, 5-21.
- Bandura, A., & Schunk, D. H. Cultivating competence, self-efficacy, and intrinsic interest through proximal self-motivation. *Journal of Personality and Social Psychology*, 1981, **41**, 586-598.
- Borkovec, T. D. Self-efficacy: Cause or reflection of behavioral change? *Advances in Behaviour Research and Therapy*, 1978, **1**, 163-170.
- Brown, I., Jr., & Inouye, D. K. Learned helplessness through modeling: The role of perceived similarity in competence. *Journal of Personality and Social Psychology*, 1978, **36**, 900-908.
- Conditte, M. M., & Lichtenstein, E. Self-efficacy and relapse in smoking cessation programs. *Journal of Consulting and Clinical Psychology*, 1981, **49**, 648-658.
- Gauthier, J., & Ladouceur, R. The influence of self-efficacy reports on performance. *Behavior Therapy*, 1981, **12**, 436-439.
- Kazdin, A. E. Conceptual and assessment issues raised by self-efficacy theory. *Advances in Behaviour Research and Therapy*, 1978, **1**, 177-185.
- Poser, E. G. The self-efficacy concept: Some theoretical, procedural and clinical implications. *Advances in Behaviour Research and Therapy*, 1978, **1**, 193-202.
- Schunk, D. H. Modeling and attributional effects on children's achievement: A self-efficacy analysis. *Journal of Educational Psychology*, 1981, **73**, 93-105.
- Weinberg, R. S., Gould, D., & Jackson, A. Expectations and performance: An empirical test of Bandura's self-efficacy theory. *Journal of Sport Psychology*, 1979, **1**, 320-331.
- Weinberg, R. S., Yukelson, D., & Jackson, A. Effects of public and private efficacy expectations on competitive performance. *Journal of Sport Psychology*, 1980, **2**, 340-349.

RECEIVED: June 10, 1981

FINAL ACCEPTANCE: May 3, 1982