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Defensive Pessimism: Harnessing Anxiety as Motivation

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In this article we discuss the strategies that people may use to cope with situations that are risky in that they present the possibility for failure and potential threats to self-esteem. Previous research has indicated that anxiety (Sarason, 1980) and explicitly set low expectations (Sherman, Skov, Hervitz, & Stock, 1981) may lead to performance deficits in these situations. Experiment 1 indicates, in contrast, that with a strategy called defensive pessimism (Norem & Cantor, 1986), individuals may sometimes use low expectations to cope with their anxiety so that it does not become debilitating. A second experiment further supports the contention that low expectations may help individuals negotiate risky situations by showing that interference with the defensive-pessimism strategy impairs performance. Subjects whose strategic construction of the situation was not interfered with do not show impaired performance. These data are interpreted as evidence that the effects of low expectations and high anxiety on performance may be mediated by the strategies individuals use when approaching risky situations.

Many of the situations people encounter simultaneously represent the possibility of achieving success and satisfaction, and the potential for failure and disappointment. Classic examples of risky situations include one's first bicycle ride without training wheels, the many precarious rituals of dating, and the paradigmatic achievement situation that has received so much attention from psychologists. Given the prevalence of these situations during certain life tasks (e.g., making one's way through college), it seems important to understand the ways in which individuals are able to construe these situations so that recognition of the inherent potential for failure does not become debilitating or immobilizing.

This article focuses on the strategies some individuals use to negotiate risky situations and the ways in which these strategies mediate the relation between anxiety, expectations, and performance. Of specific interest is the strategy of *defensive pessimism*, which involves setting unrealistically low expectations in a risky situation in an attempt to harness anxiety so that performance is unimpaired.

Extensive evidence from previous research details the potential complexity of the relation between anxiety, expectations, and performance, highlighting the need to account for the individual's capacity for interpreting situations strategically in order to emerge relatively unscathed.

For example, it is widely accepted that high levels of anxiety tend to interfere with performance in test situations (see Sarason, 1980, for a review). Interestingly, there is also evidence that individuals are aware of (or can be made aware of) this relation and are able to use this knowledge to structure situations in ways that protect them from the damaging attributional implications of failure. Smith, Snyder, and Handelsman (1982) have reported evidence indicating that highly test-anxious individuals may use their anxiety symptoms as a self-handicapping strategy in situations where presentation of those symptoms provides a viable excuse for poor performance.

There are further data to support the argument that individuals are able to respond strategically to a variety of situations in self-protective ways. Snyder and Mehlman have discussed how individuals use consensus-raising, distinctiveness-raising, and consistency-lowering attributional explanations as strategies to excuse poor performance and decrease negative emotions (Mehlman & Snyder, 1985). Similarly, in a somewhat different formulation of self-handicapping, Berglas and Jones described how individuals are able to set up a no-lose attributional situation prior to performance when the attributional implications of that performance are more important than the performance itself (Berglas & Jones, 1978; Jones & Berglas, 1978). According to this formulation, people with a history of noncontingent, positive reinforcement develop a "favorable, but fragile competence image" (Berglas, 1985, p. 240) that is threatened by impending evaluation and leads to performance anxiety. This apprehension motivates the individual to act preemptively in ways that justify failure. Examples of such self-handicapping include drug use, excessive procrastination, fatigue, and overwhelming anxiety, all of which shift direct responsibility for failure from the individual to the less attributionally incriminating handicaps. The no-lose nature of the situation becomes clear as one realizes that, in the event of success, the individual must be considered exceptionally able, given the obstacles that were overcome. Note that within this framework, performance that may otherwise have been disrupted by anxiety may even, paradoxically, improve, as the handicapping serves to reduce anxiety (Jones & Berglas, 1978).

The Jones and Berglas conception of the self-handicapper differs from the excuse-theory-based discussion of self-handicapping strategies presented by Snyder and his colleagues, in

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that the former authors were concerned with the development of a self-handicapping disposition that leads an individual continually to seek out impediments in the environment before entering a performance situation (Berglas, 1985). This contrasts with the more selective use of self-handicapping strategies reported by Snyder and others (Braginski & Braginski, 1967; Smith, Snyder, & Handelsman, 1982; Snyder, Smith, Angelli, & Ingram, 1985) as well as with the strategic withdrawal of effort as a method of coping with uncertain outcomes or anticipated failure, as explored by Pyszczynski (Pyszczynski, 1982; Pyszczynski & Greenberg, 1983).

Expectations and Defensive Pessimism

Research in a different but related vein has also highlighted significant relations between an individual's construction of performance situations in terms of potential success or failure and subsequent performance in that situation. Sherman et al. (1981) have shown that explaining the causes of hypothetical failure or success prior to performance can have significant effects on performance and that these effects may be mediated by whether firm expectations are set. Thus, subjects who explain success prior to their performance set higher expectations and perform better than control subjects who do not explain any outcome; subjects who explain failure and then are asked to state explicit expectations for their performance expect to do worse and actually perform more poorly than do control subjects and *explain success* subjects. In the absence of explicit expectations, however, *explain failure* subjects perform better than control subjects. In interpreting these data and similar results from a study by Dweck and Gilliard (1975), Sherman et al. argued that considering the possibility of failure, without setting explicit expectations, may motivate increased effort to avoid that possibility. Once overt expectations are elicited, however, they act as a cognitive "set" during performance and lead to a self-fulfilling prophecy in which poor performance confirms low expectations. Campbell and Fairey (1985) reported similar results, with some evidence that these effects may be further mediated by self-esteem, because low self-esteem subjects may be more influenced by explaining failure than are high self-esteem subjects.

There is further research, however, suggesting that individuals may *strategically* set low expectations that do not become self-fulfilling prophecies, that is, that are not followed by correspondingly low performances. Norem and Cantor have discussed a strategy called defensive pessimism in which people set unrealistically low expectations prior to entering a situation in order to prepare themselves for potential failure and to motivate themselves to work hard in order to avoid that failure (Norem & Cantor, 1986). This work showed that subjects prescreened for self-reported use of optimistic or defensively pessimistic strategies set significantly different expectations prior to performance on an anagram task, even though all subjects had high (greater than 3.0) grade-point averages (GPAs), and all subjects reported having done well in the past. There were no significant differences in actual performance on two subsequent anagram tasks, in either the failure feedback or success feedback conditions. There were significant differences, however, in the amount of post hoc revision done by the two groups of subjects in the failure condition. Subjects using an optimistic strategy (i.e., who went into the situation with high expectations corresponding to high past performances) tended to deny having had control over their performance when given failure feedback, whereas they accepted control for their performance in the success condition. This pattern corresponds to that found in the self-serving bias research referred to earlier. Subjects using a defensive-pessimism strategy, in contrast, showed no evidence of denying control after their performance in the failure condition relative to the success condition. These data were interpreted as support for the hypothesis that subjects may set unjustifiably low expectations prior to a performance in order to protect themselves from the consequences of failure and that doing so may offset the need to restructure a situation in a self-protective manner after the fact.

Examples of people using defensive pessimism are easy to come by, especially, it seems, in academia. Think, for instance, of straight-A students who have never failed a test in their lives but repeatedly insist that they are, without question, going to "bomb" an upcoming exam. Nothing their friends can say reassures them; indeed, reminding them of their past success seems only to lead to more anxiety or confusion. These persons proceed to rush home, drink gallons of coffee, study furiously throughout the night and, annoyingly but not surprisingly, receive the highest score in the class. This success does not come without considerable effort devoted to preparation, however, and the anxiety, although perhaps unjustified, is very real.

Harnessing Anxiety as Motivation

The research on defensive pessimism to be reported is based on the hypothesis that the persons described in the previous example are able to mobilize strategically the risk of failure in a particular situation by harnessing their anxiety as motivation. As part of this process, they set expectations that seem considerably lower than what would be warranted by objective consideration of past base rates. These expectations do not, however, become self-fulfilling prophecies, nor does the anxiety, although real, lead directly to performance deficits. In fact, this strategy may be thought of as a method by which individuals are able to cope with their anxiety, in effect, change it from a debilitating to a motivating force. Moreover, in recognition of the strategic nature of these expectations, it is important to distinguish them from the overall gloomy outlook of depressives. Use of the defensive-pessimism strategy does not imply that these individuals will be dissatisfied with a successful performance, as might depressive persons (Kuiper, 1978); nor does it imply that they will show performance or motivational deficits after failure, as would be expected of depressives (Norem & Cantor, 1986). Furthermore, subjects using defensive pessimism do not report a lack of control over success, which might also be expected of depressive individuals.

This formulation of the defensive-pessimism strategy can be distinguished from post hoc self-protective strategies, such as the illusion of control (Alloy & Abramson, 1979; Langer, 1975), attributional egotism (Snyder, Stephan, & Rosenfield, 1978), and illusory glow optimism (Lewinsohn, Mischel, Chaplain, & Barton, 1980). It can also be distinguished from expectations and excuses formulated in direct response to experimental ma-

nipulation. That is, use of defensive pessimism involves a priori structuring of a situation (as in the study referred to above), occurring in the absence of experimental manipulation and before a performance is begun.

Moreover, the defensive-pessimism strategy, although clearly related to self-handicapping, may be further differentiated because subjects using this strategy do not appear to be actively handicapping their performance—except insofar as explicit low expectations ought to lead automatically to lower performance, which is not the case in the aforementioned experiment (nor in the data to follow). This distinction blurs somewhat when one considers Berglas and Jones's argument that anxiety may be reduced by self-handicapping, thus leading to a better outcome than if no handicapping had occurred and anxiety had remained high. However, an attempt to deny responsibility for poor outcomes seems somewhat less a part of the defensive-pessimism strategy than of self-handicapping, because Norem and Cantor did not find that subjects using the strategy denied responsibility for failure as opposed to success. Rather, the strategy seems to function defensively in that it *prepares* individuals for the possibility of failure. Feather (1969) provided evidence that individuals may be more upset by unexpected failure than by expected failure and more satisfied with unexpected success than with expected success. Similarly, Wortman, Constanzo, and Witt (1973) reported that anticipation of a future performance can lead to lower self-attributions, which may be self-protective inasmuch as they at least provide subjects with the consolation of having been able accurately to predict a given outcome.

Similar processes may explain how the defensive-pessimism strategy functions to allow individuals to brace themselves psychologically for the possible advent of failure. Further support for this argument is suggested by the effectiveness of the therapeutic technique of playing through a *worst-case* analysis in dealing with anxiety-related problems (Meichenbaum, 1977); for the person using the defensive-pessimism strategy, confronting failure head-on may make it seem more manageable and serve to reduce anxiety.

Overview

In order to explore further the potential function of these strategies, two experiments were designed to provide evidence for the following hypotheses:

1. On a standard measure of test anxiety, subjects prescreened for use of defensive pessimism in academic situations will score significantly higher in anxiety than subjects prescreened for optimism in academic situations.

2. Even though all the subjects selected have similar (high) GPAs and report having done quite well in academic situations in the past, defensive pessimists will set significantly lower expectations for their performance than will optimists.

3. In the absence of an experimental manipulation, there should be no differences in the actual performance of these subjects on the experimental tasks, despite past work indicating that low expectations can become self-fulfilling prophecies when explicit expectations are elicited and *despite* evidence that higher levels of anxiety often lead to performance deficits. This prediction, thus, conflicts with that derived from other theoretical accounts of the relation between expectations and performance, and it emphasizes the individual's capacity for coping with anxiety-arousing situations.

4. Finally, defensive pessimism is a strategic way of constructing a situation. This implies that subjects who use this strategy do so with more or less explicit purposes or goals, that is, to motivate themselves to work hard, to manage their anxiety, and to avoid the potential failure that is inherent in a risky situation.

The strategic nature of defensive pessimism also implies that interference with the strategy should result in performance deficits and some confusion about how to interpret one's performance. This same interference, in the form of praise or encouragement, should result in better performance and greater satisfaction for subjects using an optimistic approach. This interaction should occur because the manipulation interferes with the defensive pessimist's usually effective strategy, but it augments or reinforces that of the optimistic subject. Encouragement or high expectations from another person disrupts defensive pessimists' attempts to reduce anxiety by lowering their expectations. This unharnessed anxiety can then be expected to impair performance. In the event of a poor performance in this situation, the defensive pessimist should resort to post hoc protective strategies such as those used by optimistic subjects: specifically, denial of responsibility for or control over a poor performance and acceptance of responsibility for a good performance. In contrast, as was the case in previous research (Norem & Cantor, 1986), defensive pessimists whose strategy is not interfered with should be prepared for the consequences of a poor performance; hence, they should not attempt to deny control over that performance in order to protect their sense of self-esteem.

Experiment 1

The main purpose of this experiment was to demonstrate that subjects prescreened for use of defensive pessimism or optimism strategies in academic situations would set predictably different expectations and exhibit predictably different levels of anxiety before beginning a task but would not perform significantly differently on that task.

Method

Overview. Prescreened subjects were given the Mandler–Sarason Test Anxiety Questionnaire (TAQ; Mandler & Sarason, 1952) and were asked to report how satisfied and in control they expected to feel during the experiment. Subjects were then asked to predict how well they would do on a tracing-puzzle task. After finishing the task, subjects were asked to report on how much control they felt during the task, how satisfied they were with their performance, and how well they thought they had done.

Subjects. One thousand thirty-three University of Michigan undergraduates from an introductory psychology subject pool completed, in partial fulfillment of a course requirement, a prescreening questionnaire designed to identify self-reported use of optimistic or defensively pessimistic strategies in an academic domain. Subjects indicated to what degree a series of eight statements describing characteristics of either optimism or defensive pessimism was characteristic of their thoughts and behavior in academic situations (see Table 1). An optimism–pessimism score was computed for each subject by subtracting the sum of their endorsements of four pessimistic items (Questions 1,

Table 1
Optimism–Pessimism Prescreening Questionnaire

Item
1. I go into academic situations expecting the worst, even though I know I will probably do OK.
2. I generally go into academic situations with positive expectations about how I will do.
3. I've generally done pretty well in academic situations in the past.
4. I often think about what it will be like if I do very poorly in an academic situation.
5. I often think about what it will be like if I do very well in an academic situation.
6. I often think about what I would do if I did very poorly in an academic situation.
7. I often try to figure out how likely it is that I will do very well in an academic situation.
8. When I do well in academic situations, I often feel relieved.
9. When I do well in academic situations, I feel really happy.

Note. Subjects rated each of the items on an 11-point scale that ranged from *not at all true of me* (1) to *very true of me* (11).

4, 6, and 8) from the sum of their endorsements of four optimistic items (Questions 2, 5, 7, and 9). Previous administration of this questionnaire has shown that Items 1, 2, 3, and 6 are most predictive of the total optimism–pessimism scores (item by item correlations with total score, $rs > .57$). We selected individuals from the most pessimistic and optimistic thirds of the distribution of scores who also strongly endorsed Question 3 ("I've generally performed well in academic situations in the past"). In addition, we only selected subjects whose GPA was greater than 3.0, in an attempt to further control for past experience and ability. (There were no significant differences in GPA for optimists and pessimists in either Experiment 1 or Experiment 2.)

The latter two selection criteria were included in order to obtain subjects for whom objective past performance indicators (GPA) had been positive and subjects who were willing to acknowledge their successful past base rate in academic situations (Question 3 on the prescreening). These criteria are crucial to distinguishing between people whose pessimism is *defensive* and those whose pessimism is in some sense *realistic.* The latter group includes people whose past performance is objectively low and whose subsequent low predictions are based on that performance, as well as those people who are unwilling or unable to acknowledge past successes and who base their low expectations on their *subjective* perceptions of poor past performance (e.g., depressives). Subjects using the defensive-pessimism strategy in these experiments, in contrast, have objectively high past base rates that they acknowledge; their pessimism can therefore be understood as defensive as opposed to realistic. Further information on the prescreening is available in Norem and Cantor (1986) and Showers and Cantor (1985).[1]

Procedure. Sixty-four prescreened subjects—35 optimists and 29 pessimists—participated in the first experiment.[2] The study was run with subjects in groups of 4 or 5, arranged so that they would be unable to see one another's papers. All subjects were told that the study was concerned with "the kinds of abilities necessary for different kinds of tasks, and people's understanding of their abilities." We expected that this explanation, in conjunction with the description of the task and the testlike atmosphere, would serve as an achievement induction that would prime performance goals connected with academic situations and the risks congruent with attempts to achieve those goals (Weiner, 1965).

Subjects were then instructed to complete the Mandler–Sarason TAQ. After this the experimental task was described, and the subjects were asked to predict how well they thought they would do on an 11-point scale that ranged from *very poorly* (1) to *very well* (11).

After completing the 15-min tracing-puzzle task, subjects were instructed to answer a final set of questions about how much control they felt they had during the task, how well they thought they had done, and how satisfied they were with their performance. All questions were answered on a scale that ranged from 1 (*no control, very poorly, or unsatisfied*) to 11 (*total control, very well, or satisfied*). All subjects were then debriefed as to the purpose of the prescreening and the study, and comments or observations were invited. Subjects were thanked for their participation and dismissed.

A description of the psychometric properties of the TAQ is available elsewhere (Mandler & Sarason, 1952). The tracing-puzzle task consisted of a series of geometric drawings, the lines of which subjects were supposed to trace around without lifting their pencil or retracing lines they had already covered (Feather, 1966).

Results

Subjects selected from the prescreening as likely to use the defensive pessimist strategy scored significantly higher on the TAQ than did subjects selected as optimists, with a higher score indicating more anxiety, $F(1, 63) = 36.27$, $p < .001$. Defensive-pessimism subjects also predicted that they would do significantly less well than optimism subjects predicted they would do, $F(1, 63) = 10.26$, $p < .003$. These differences are especially interesting given that every attempt was made to control for prior academic experience and ability. There was no significant difference between defensive pessimists and optimists in GPA ($M = 3.61$ and $M = 3.58$, respectively; $Fs < 1$), nor was there a significant difference in the extent to which either group endorsed Question 3 on the prescreening, which was meant to tap whether subjects would acknowledge their positive past experience ($F < 1$).

There were significant differences in expected satisfaction

[1] It is important to recognize that this questionnaire is not intended to measure a trait that some people have more of than others. Rather, it is designed to select people who are more likely to use defensive pessimism and less likely to use optimism (from the pessimistic tail of the distribution), and vice versa (from the optimistic tail), as opposed to the people in the middle of the distribution, who may be equally likely to use either strategy in a given situation. We hypothesize that individuals have a variety of strategies in their repertoire and select from that repertoire according to their construction of a particular situation. This hypothesis is supported by the answers to questions about the use of defensive pessimism and optimism in social domains, which correlated only moderately with scores for academic defensive pessimism in a previous prescreening.

[2] We found no significant sex differences on prescreening or experimental measures in the first study summarized earlier. Similarly, preliminary analysis with sex as a factor showed no significant differences in the first experiment reported here (proportions of male and female subjects were roughly equal in each condition, in all experiments). On the basis of these preliminary analyses, no additional analyses were performed with sex as an independent factor. Note that this lack of differences contrasts with the findings of some previous research on self-handicapping in which different patterns of findings and strengths of effects have been reported for men and women in different situations. In contrast to research on drug and alcohol use and symptom reporting, however, it may be argued that few sex differences would be expected in the experiments reported earlier because the demands of the task and situation do not appear to be easily construed according to sex-appropriate or inappropriate behaviors.

Table 2
Expectations, Ratings of Performance, Satisfaction, and Control From Experiment 1

Item	Optimists[a]		Pessimists[b]	
	M	*SD*	*M*	*SD*
Pretask				
Expectations for performance	7.63	1.85	6.10	1.95
Expected satisfaction	8.60	1.67	7.76	1.76
Expected control	9.14	1.24	8.14	1.60
Posttask				
Perceived performance	7.62	2.30	6.97	2.50
Satisfaction	8.05	2.25	6.79	2.61
Control	8.65	2.44	7.69	2.19

Note. These ratings were made on scales that ranged from 1 (*very poorly, unsatisfied, no control*) to 11 (*very well, satisfied, total control*).
[a] $N = 35$.
[b] $N = 29$.

and control *before* the task (see Table 2). Pessimists rated their expected control and satisfication significantly lower than did optimists: $F(1, 63) = 8.02$, $p < .01$, and, $F(1, 63) = 3.91$, $p < .05$, respectively.

Despite their expectations, however, defensive pessimists did not fulfill their qualms by performing poorly. There was no significant difference in total number of puzzles solved by defensive pessimists and optimists ($Fs < 1$).

After the task was completed, there were no significant differences between pessimists and optimists in how well they thought they had done, $F(1, 63) = 1.22$, *ns*, although a marginally significant difference in how much control they felt they had during the task remained, $F(1, 63) = 2.73$, $p = .11$. Defensive pessimists were significantly less satisfied with their performance than were optimists, $F(1, 63) = 4.33$, $p < .05$.

Discussion

Results from Experiment 1 provide encouraging support for the first three hypotheses. Subjects prescreened for use of defensive pessimism gave significantly lower predictions for their performance and scored significantly higher on anxiety than did subjects selected for use of optimism, even though objective past performance was equivalent for the two groups. Despite greater anxiety and lower expectations, however, defensive pessimists performed as well as the optimists. Explicit low expectations did not, in this case, become a self-fulfilling prophecy, nor did higher anxiety lead to performance deficits, as has been reported previously. Moreover, defensive pessimists did not evaluate their performance lower than did optimists, although they were somewhat less satisfied (Lewinsohn et al., 1980). These results thus support the argument that an individual's prior construal of a situation can significantly moderate the usual effects of anxiety on performance.

Experiment 2

Although Experiment 1 provided evidence that the defensive pessimists' high anxiety and low expectations do not hurt their performance, it does not directly address whether defensive pessimists are, in fact, helped by using the strategy. One form of evidence that defensive pessimism functions strategically to help individuals negotiate risky situations would be data showing that not using the strategy in a particular situation leads to performance deficits. Thus, Experiment 2 was designed to see if interference with their strategy (as opposed to direct interference with performance) leads to decreased performance for subjects accustomed to using the defensive-pessimism strategy.

Method

Overview. Prescreened subjects were randomly assigned to either an *encouragement* or *no-encouragement* condition and were run individually. Initially, subjects were asked to indicate their GPA, to note how well they generally expect to do on exams, and to write a description of their thoughts and feelings the night before an exam. In the no-encouragement condition, subjects were then asked to work on a tracing-puzzle task and an anagram task. In the encouragement condition, before subjects started working, the experimenter looked at their GPAs and then indicated that the subjects would probably do very well on the experimental tasks. All subjects answered a series of questions about their satisfaction, control, and perceived performance following the tasks, in addition to completing the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Subjects. A new introductory psychology subject pool of 1,163 students at the University of Michigan completed the same prescreening questionnaire discussed in Experiment 1. Using the same criteria described earlier, 87 subjects were selected and participated in the study—43 prescreened optimists and 44 prescreened pessimists.

Procedure. Subjects were run individually after they were randomly assigned to either the encouragement or no-encouragement (control) condition. The experimenter was not aware of the subjects' status on the prescreening while the experiment was in progress.

First, as background information, subjects were first asked to indicate their year in college, their major, and their GPA. After this, they were asked to imagine themselves the night before an upcoming exam and, then, to indicate how well they generally expect to do by marking the appropriate point on an 11-point scale. Each subject then took 3 min to write a description of how he or she usually feels and thinks the night before an exam.

After completing this description subjects in the no-encouragement condition were given instructions for a tracing-puzzle exercise similar to that described in Experiment 1. In addition, they were given 5 min to work on a series of 72 anagrams, which varied from quite easy to moderately difficult, with the instructions "Do as many as you can in the time allotted."

In the encouragement condition, a female experimenter looked over the subject's GPA before introducing the experimental tasks. She then commented, "Hmm, given how well you've done in the past, I would think that you'd be very confident about your performance. You will probably do very well on the upcoming tasks." (All subjects had GPAs greater than 3.0.)

For the prescreened optimists, it was thought that this manipulation would be interpreted simply as general encouragement that would further bolster their (already high) expectations for their performance. For subjects selected for use of the defensive-pessimism strategy, however, this manipulation should have made salient the discrepancy between their high past experience and the unrealistically low expectations they set as part of the strategy. It was thought that having the experimenter make clear this inconsistency would interfere with the defensive pessimists' attempts to decrease their anxiety by lowering their expectations; in some sense the experimenter reinstated the anxiety. Doing so should have effectively interrupted the strategic mobilization of anxiety, leaving

the subject psychologically unprepared in the event of a poor performance. In turn, this interference should have led to a poorer performance on the part of encouraged pessimists, relative to the performance of the nonencouraged pessimists. In contrast, encouraged optimists should have performed the same or even better than nonencouraged optimists, because the manipulation should have augmented or reinforced their usual strategy, rather than interfered with it.

After the encouragement manipulation all subjects in this condition proceeded to work on the same tasks as in the no-encouragement condition. Finally, all subjects answered questions indicating how well they thought they had done on both the tracing puzzles and the anagrams, how satisfied they were with each performance, and how much control they felt they had over each task. All subjects also completed the Rosenberg Self-Esteem Scale.

Ratings of expected performance, perceived performance, satisfaction, and control were made on 11-point scales that ranged from 1 (*no control, very poorly,* or *unsatisfied*) to 11 (*total control, very well,* or *satisfied*). Details of the Rosenberg Self-Esteem Scale are available elsewhere (Rosenberg, 1965, 1979).

Results

Once again, subjects selected for use of the defensive-pessimism strategy reported that they expected to do significantly less well than the optimistic subjects expected to do ($F = 104.99, p < .001$). There were no differences, however, between optimists and pessimists in GPA ($M = 3.60$ and $M = 3.59$, respectively, $Fs < 1$).

Prototypes (see Cantor, Mischel, & Schwartz, 1982) were constructed from subjects' written descriptions of their thoughts and feelings before an exam in order to gather evidence that defensive pessimists strategically construct such situations differently from optimists (see Table 3). Subjects' descriptions were split into phrases, and the phrases were sorted according to common content and were included in the prototype if they were listed by at least 6 subjects.

Immediately apparent in Table 3 is the difference in expression of confidence and anxiety between the two prototypes. Defensive pessimists emphasized potential negative outcomes and their consequences; noticeably absent are feelings of being confident or relaxed. Optimists, in contrast, although they may have admitted to being "a little" nervous, seem to have been more "objectively" assessing their preparedness and feeling more relaxed. These findings are comparable to those gathered in a thought-listing procedure done with a previous sample of prescreened subjects (Showers & Cantor, 1984).

Especially important, in light of the emphasis on defensive pessimism as a strategy, are two statements: "I think about how unprepared I am in order to get myself to work harder" and "I usually end up doing better than I expected." The first statement indicates that defensive pessimists may indeed use their anxiety to motivate themselves. The second statement co-occurred with the first in five out of six descriptions, which points to at least some awareness of the effectiveness of the strategy, insofar as pessimists recognize that their performance generally exceeds their low expectations.

A 2 (optimist, pessimist) × 2 (no encouragement, encouragement) analysis of variance (ANOVA) on actual performance scores from the tracing task revealed a significant Strategy × Condition interaction, $F(1, 83) = 6.10, p < .02$ (see Table 4). One-way, within-cell analyses revealed that encouraged pessimists performed significantly worse than did nonencouraged pessimists, $F(1, 43) = 4.47, p < .05$, and significantly worse than did encouraged optimists, $F(1, 41) = 4.03, p < .05$. There were no significant main effects of either strategy or experimental condition ($Fs < 1$).

Table 3
Strategy Prototypes

Statement	No. of subjects mentioning
Optimist prototype	
1. I'm studying the material	24
2. Feel confident	19
3. Feel "a little" nervous	15
4. Feel relaxed/calm	12
5. I feel like I'm prepared	10
6. I would "psych out" the exam questions	10
7. Plan sleep/study schedule	8
8. I'm *not* nervous/worried	7
Defensive-pessimism prototype	
1. I anticipate doing poorly	29
2. Feel nervous	22
3. Feel anxious	14
4. I think about how unprepared I am *in order to* get myself to work harder	11
5. I study as much as possible	11
6. I think about the exam	10
7. I think about what will happen if I fail	6
8. I usually do better than expected	6

Note. Only those statements repeated by 6 or more subjects were included in the prototypes.

Mean scores on the anagram task follow roughly the same pattern, although the interaction is not statistically significant. There were no significant differences in performance between encouraged and nonencouraged optimists on the tracing task, $F(1, 42) = 1.78$, *ns*, or on the anagram task, $F(1, 42) = 1.14$, *ns*. Moreover, there were no significant differences between the performance of nonencouraged optimists and nonencouraged pessimists on either task, $F(1, 41) = 2.2$, *ns*, and $F(1, 41) = 1.04$, *ns*, respectively.

A 2 (optimist, pessimist) × 2 (nonencouraged, encouraged) ANOVA on the posttask measures revealed a main effect of strategy on perceived performance and satisfaction for both tasks (see Table 5). Optimists perceived their performance as significantly better than pessimists perceived theirs, on both the tracing task and the anagram task, $F(1, 83) = 5.12, p < .03$, and, $F(1, 83) = 7.61, p < .01$, respectively. Optimists were also significantly more satisfied with their performance on both tasks than were pessimists: $F(1, 83) = 5.12, p < .01$, for tracing, and, $F(1, 83) = 8.89, p < .01$, for the anagrams. There were no significant main effects of condition on any of the posttask measures. There were also no significant main effects on ratings of the degree of control subjects felt on either task. However, there was a significant interaction on the satisfaction variable for the anagram task, $F(1, 83) = 4.55, p < .05$. Within-strategy group analyses showed that encouraged optimists felt marginally more

Table 4
Mean Performance Scores for Experiment 2

Task	Nonencouraged optimists ($N = 24$)		Encouraged optimists ($N = 19$)		Nonencouraged pessimists ($N = 20$)		Encouraged pessimists ($N = 23$)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Tracing	11.79	3.74	13.42	4.24	13.76	5.13	10.69	4.48
Anagram	17.86	8.58	21.10	9.74	20.37	7.79	18.86	7.85

Note. Performance on the tracing task was measured as the number completed out of a total of 30 puzzles. Performance on the anagram task was measured as the number completed out of a total of 72 anagrams.

satisfied with their performance than did nonencouraged optimists, $F(1, 42) = 3.40$, $p = .07$, whereas encouraged pessimists felt less satisfied than did nonencouraged pessimists, although not significantly so, $F(1, 43) = 1.29$, *ns*.

There was a significant main effect of strategy on self-esteem scores, with optimists reporting significantly higher self-esteem than did pessimists, $F(1, 82) = 42.44$, $p < .001$. In addition, there was a significant Strategy × Condition interaction effect, $F(1, 82) = 6.79$, $p < .01$. Within-strategy group analyses indicated that encouraged pessimists reported significantly higher self-esteem than did nonencouraged pessimists, $F(1, 43) = 5.44$, $p < .02$. There was no significant difference in self-esteem between nonencouraged and encouraged optimists, $F(1, 42) = 1.31$, *ns*.

There were some interesting differences in the pattern of correlations among the posttask variables between the four cells in the experiment, especially for the anagram task. The ratings for perceived performance and satisfaction were correlated highly for all subjects (see Table 6). Ratings for satisfaction and control on both the tracing task and the anagram task were highly correlated only for encouraged optimists ($r = .57$ and $r = .71$, $ps < .01$). For nonencouraged optimists, ratings were correlated significantly only for the anagram task ($r = .68$, $p < .01$), as was the case for the encouraged pessimists ($r = .45$, $p < .05$). Neither correlation was significant for the nonencouraged pessimists.

The pattern of correlations between perceived performance and control was particularly intriguing. For both tasks, in both conditions, there were significant correlations between perceived performance and control for the optimists (see Table 6). This correlation was also significant for encouraged pessimists on the anagram task, although not for the tracing task. For nonencouraged pessimists, the correlation was not significant for either task.

For both nonencouraged and encouraged optimists, then, the correlation between perceived performance and control conformed to the typical attributional egotism pattern: In general, they were more likely to feel in control of a good performance than of a poor one. This pattern also held for the encouraged pessimists on the anagram task. For the nonencouraged pessimists, however, feelings of control were apparently more independent of perceived performance, as was found previously by Norem and Cantor (1986).

Finally, self-esteem scores did not correlate significantly with any of the posttask variables for optimists in either condition. For encouraged pessimists, self-esteem correlated negatively with feelings of control on the diagram task ($r = -.47$, $p < .05$). Correlations between the other posttask variables and self-esteem for this group were all negative, although none of the others were significant. In contrast, self-esteem correlated positively with satisfaction on both the tracing task and the anagram task for nonencouraged pessimists ($r = .52$, $p < .05$; $r = .59$, $p < .01$, respectively).

Discussion

This study provides considerable evidence that people may set low expectations strategically in order to enable themselves

Table 5
Perceived Performance, Satisfaction, Control, and Self-Esteem Ratings From Experiment 2

Item	Nonencouraged optimists ($N = 24$)		Encouraged optimists ($N = 19$)		Nonencouraged pessimists ($N = 20$)		Encouraged pessimists ($N = 23$)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Perceived performance on tracing	5.54	2.12	5.73	2.18	4.52	1.47	4.26	1.68
Satisfaction on tracing	6.34	2.51	5.89	2.64	5.19	2.27	4.65	2.37
Control on tracing	6.54	2.43	6.05	2.87	6.0	2.51	6.13	3.05
Perceived performance on anagrams	6.50	2.34	7.31	2.28	5.57	1.96	5.69	1.96
Satisfaction on anagrams	6.58	2.64	8.00	2.31	6.14	2.17	5.35	2.44
Control on anagrams	7.91	2.04	8.10	2.54	7.09	2.36	8.00	2.11
Self-esteem	47.50	3.13	46.20	4.45	37.35	7.79	41.82	4.86

Note. Perceived performance, satisfaction, and control ratings were made on scales that ranged from 1 (*very poorly, unsatisfied, no control*) to 11 (*very well, satisfied, total control*). Self-esteem scores were from the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Table 6
Correlation Matrices for Experiment 2

Variable	T-Perf	T-Sat	T-Cont	A-Perf	A-Sat	A-Cont
			Nonencouraged optimists (N = 24)			
T-Sat	.66**	—				
T-Cont	.47*	.33	—			
A-Perf	.38	.41*	.11	—		
A-Sat	.32	.59**	.21	.86**	—	
A-Cont	.48*	.43*	.71**	.54**	.68**	—
SE	.07	.10	−.11	.23	.24	−.03
			Encouraged optimists (N = 19)			
T-Sat	.81**	—				
T-Cont	.69**	.58**	—			
A-Perf	.67**	.37	.62**	—		
A-Sat	.66**	.60**	.56*	.85**	—	
A-Cont	.36	.22	.53*	.71**	.71**	—
SE	.32	.17	.21	.41	.23	.31
			Nonencouraged pessimists (N = 20)			
T-Sat	.61**	—				
T-Cont	.41	.23	—			
A-Perf	.40	.07	−.18	—		
A-Sat	.31	.27	−.22	.76**	—	
A-Cont	.50*	.38	.71**	.18	.13	—
SE	.17	.52*	−.22	.27	.59**	.18
			Encouraged pessimists (N = 23)			
T-Sat	.78**	—				
T-Cont	.32	.27	—			
A-Perf	.14	.25	.0	—		
A-Sat	.14	.34	.14	.84**	—	
A-Cont	.31	.24	.53**	.46*	.45*	—
SE	−.19	−.13	−.48*	−.18	−.32	−.26

Note. T-Perf = perceived performance on tracing. T-Sat = satisfaction on tracing. T-Cont = control on tracing. A-Perf = perceived performance on anagrams. A-Sat = satisfaction on anagrams. A-Cont = control on anagrams. SE = score on Rosenberg Self-Esteem Scale.
* $p < .05$.
** $p < .01$.

to manage their anxiety such that, instead of being debilitating, it becomes motivating. First, there are the prototypes constructed from subjects' own descriptions of how they think and feel the night before an exam (a "risky" situation). Pessimists emphasized feeling nervous and anxious, in contrast to the generally relaxed and confident attitudes of the optimists. There is also some evidence in these statements to suggest that pessimists may recognize that emphasizing to themselves the potential for failure in the situation "caused" them to work harder in order to avoid that failure. In conjunction with the admission that they generally do better than they expected, these descriptions seem to indicate that subjects are to some extent aware of the cognitive trick they are playing on themselves. It is important to realize, of course, that the "trick" involves the setting of low expectations, not the generation of anxiety. For whatever reason, these subjects are genuinely more anxious than those subjects using an optimistic strategy—at least as anxiety is measured using the TAQ. What is especially significant, however, is that pessimists whose strategy is not interfered with do not perform any worse than do subjects using an optimistic strategy. When the defensive pessimist strategy is interfered with, however, by means of "encouragement" from the experimenter, there is a significant decrease in performance (at least on the diagrams). The performance deficit does not occur, moreover, for the optimists who are encouraged. This interaction provides evidence that, under normal circumstances, defensive pessimism can function to help anxious individuals control their anxiety and perform successfully.

These results also point to circumstances in the real world when the defensive-pessimism strategy might be less effective. One's first inclination, upon hearing the dire predictions of pessimists, might be to assume that they are invitations to reassure the protester with compliments on their intelligence and ability. The evidence presented here, however, would tend to argue against this assumption. The compliment on past performance and assurance regarding performance on the experimental tasks led to worse performance for the defensive-pessimism subjects.

The pattern of results found in the posttest variables also tends to support the argument that the pessimist strategy functions defensively to prepare an individual for potential failure, rather than to allow denial of responsibility for or control over failure. Pessimists whose strategy was not interfered with did not show the typical attributional egotism pattern of claiming more control over better performance and less control over poorer performance (nor did they report lower overall feelings of control after the task); and they reported lower self-esteem than did any of the other subjects. In fact, their reported self-esteem was closely tied to their feelings of satisfaction with their performance—unlike that of the other subjects. In contrast, the optimistic subjects in both conditions of the experiment showed the typical attributional egotism pattern in the strong correlations between their evaluations of their performance and their feelings of control. Interestingly, the encouraged pessimists seem to look more like optimists: For the anagram task, at least, their reported feelings of control and their evaluation of their performance were significantly correlated, just as is the case for the optimists. Moreover, their reported self-esteem was higher than that of the nonencouraged pessimists.

This pattern of results may indicate that not only was the performance of the encouraged pessimists disrupted by the experimental manipulation, but the defensive functions of the strategy were also affected. That is, the encouraged pessimists may have been motivated by the experimental manipulation to adopt the self-presentational, (post-hoc) protective strategies used by the optimists. From this perspective, both the correlation between control and perceived performance and the higher self-esteem ratings (relative to the nonencouraged pessimists) can be interpreted as attempts to present the self in a positive light, in response to the disruption the experimental situation caused in the encouraged pessimists' usual functional interpretation of a risky situation. In sum, stripped of their original strategy, the encouraged pessimists began to adopt optimistic strategies as they adjusted their construction of the experimental tasks. The nonencouraged pessimists, in contrast, were able to stick with their habitual construction of the situation and, thus, may not have felt pressured to present themselves in a

face-saving light after the tasks were over. Similarly, both groups of optimists were able to use their typical constructions of the situation after the fact: the nonencouraged optimists because they were not interfered with and the encouraged optimists because what was "interference" for the defensive-pessimist strategy was reinforcement of the optimistic strategy.

General Discussion

Perhaps the most significant finding from these two experiments is that the effects of setting low expectations and high anxiety may be moderated considerably by an individual's construction of a situation. Thus, results from these experiments, along with those previously reported by Norem and Cantor (1986), indicate that setting low expectations may function strategically to help people "use" their anxiety in productive ways, rather than being debilitated by it. Subjects who set low expectations performed worse than did subjects who set high expectations in these studies only when there was a manipulation designed to interfere with the strategic function of those expectations. When there was no interference, there was no difference in the performance of subjects using the defensive-pessimism strategy and subjects using an optimistic strategy. By using the defensive-pessimism strategy, these subjects appear to be able to cope with their higher anxiety by using it to motivate themselves. This finding gains in significance when one considers recent evidence on the potential for explicitly set expectations to function as self-fulfilling prophecies (Sherman et al., 1981).

Carver and his colleagues have argued that the debilitating effects of low expectations on performance are mediated by the extent to which the anxious individual is task focused as opposed to self-focused (Carver, 1979; Carver, Blaney, & Scheir, 1979). Similarly, anxiety is often presumed to interfere with performance by directing limited attentional resources to nontask-oriented stimuli and by decreasing the attention available for the task (Wine, 1971). It may be that individuals are able to overcome the focus on nontask-oriented stimuli and become more task focused by using the strategy to control their anxiety. The manipulation in Experiment 2 may have disrupted this shift in focus by defensive pessimists. Once self-focus has been reestablished (or once the task focus has been disrupted), high anxiety may lead to performance deficits for these subjects, as would usually be expected.

What is clear from these data is that individual differences in the interpretation of a risky situation can significantly moderate the effects of high anxiety and low expectations on performance. These results have at least two further implications. First, models constructed to account for behavior in risky situations must incorporate the individual's ability to construe a situation flexibly and complexly and to select strategies appropriate to that construal, as opposed to assuming a rigid or static situation in which people become immobilized victims of their anxiety. Second, and perhaps less obvious, attempts to change an apparently maladaptive or nonfunctional response set may have unexpected and undesired consequences if one ignores the potential cognitive/strategic value of that behavior. Thus, one can easily imagine an instructor who tries repeatedly to assure a student who predicts he or she will perform poorly that in fact he or she will do "just fine" and there is nothing to worry about. If one considers that the encouragement provided in the experiment lead to a decrease in performance, it seems clear that exhortations of the power of positive thinking may not always be particularly helpful.

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