

Dysphoria as a Moderator of the Relationship Between Perceived Effort and Perceived Ability

James A. Shepperd, Robert M. Arkin, Alan Strathman, and Sara M. Baker

Although Heiderian logic (F. Heider, 1958) proposes an inverse relationship between ability and effort, research has uncovered dramatic individual differences in the judged relationship between the two. Some view ability and effort as positively related; others view them as negatively related. Study 1 explored dysphoria as a moderator of this relationship by gathering dysphoric and nondysphoric individuals' perceptions of their effort and ability on daily activities. Although ability and effort generally were positively related, dysphorics reported lower ability on high effort tasks. In Study 2, Ss rated their effort as high or low. Dysphorics discounted ability when effort was high; nondysphorics reported the greatest ability when they expended the greatest effort. Collectively, there was no support for an inverse relationship between ability and effort. However, dysphorics infer less ability than nondysphorics following high effort.

Do perceivers attribute greater ability to someone who succeeds with little effort than to someone who succeeds with great effort? Heider (1958) argued that they do and proposed a logic to perceiver attributions that specifies an inverse relationship between attributions of ability and effort. Specifically, given task success, perceivers ascribe greater ability to a target when effort is low and less ability to a target when effort is high. There is some evidence, however, that many perceivers do not follow Heiderian logic when making self-attributions. Instead, they seem to perceive ability and effort as positively related (Surber, 1984). The present research investigates the use of Heiderian logic in self-attributions following task success and examines whether the relationship between perceived effort and perceived ability is moderated by individual differences in dysphoria.

Ability Attribution and Heiderian Attributional Logic

Attribution theory and research is concerned with the process by which people form causal interpretations of events around them and events in which they participate (Heider,

1958). Much of attribution theory has focused on the antecedents of ability ascriptions, largely because of the central role ability ascriptions seem to play in such topics as achievement motivation (e.g., Touhey & Villemez, 1980), self-efficacy (Bandura, 1985), learned helplessness (Abramson, Seligman, & Teasdale, 1978), and other related phenomena. Overall, the benefits of seeing oneself as competent and effective seem quite clear (Bandura, 1985).

Indeed, one's ability ascriptions are influential in effective coping (e.g., Snyder & Ford, 1987) and self-improvement (Bandura, 1985). For instance, people who are subtly induced to view themselves as capable of high performance on some task are more likely to persist toward success when they engage in the task (Cervone & Peake, 1986).

Individual differences in people's assumptive worlds seem to play an important role in determining ability ascriptions. Sometimes termed "world models" (Bowlby, 1969), "self-theory" (Epstein, 1984), or "structures of meaning" (Marris, 1975), personal theories about the probable causes of events (based on certain assumptions about reality) seem to serve as guides to the way people perceive all manner of events. With regard to making inferences about ability, Surber (1984) uncovered two qualitatively distinct ways people judged the relationship between ability and effort. Some people judged the relationship between ability and effort to be positive, whereas others judged the relationship to be negative.

Surber's (1984) finding is somewhat surprising, given the attributional logic outlined first by Heider (1958) and later clarified by Kelley (1971). This attributional logic clearly specifies an inverse relationship between ability and effort. Specifically, judgments of ability are thought to arise from an interaction of task outcome and effort. That is, given task success, there is greater attribution to the presence of ability when effort is lower, and vice versa. Of course, some degree of ability and some measure of effort are both necessary to realize a successful outcome; neither alone is sufficient. However, the role of ability is discounted to the extent that great effort is perceived to be clearly

Editor's Note. We are grateful to Howard Tennen for serving as Guest Editor of this article.

James A. Shepperd, Department of Psychology, University of Florida; Robert M. Arkin, Department of Psychology, Ohio State University; Alan Strathman, Department of Psychology, University of Missouri, Columbia; Sara M. Baker, Department of Psychology, University Of Oklahoma.

We thank Carol Ford Arkin and several anonymous reviewers for helpful comments on a draft of this article.

Correspondence concerning this article should be addressed to James A. Shepperd, Department of Psychology, University of Florida, Gainesville, Florida 32611-2065, or to Robert M. Arkin, Colleges of the Arts and Sciences, 164 West 17th Avenue, Ohio State University, Columbus, Ohio 43210-1371. Electronic mail may be sent to shepperd@webb.psych.ufl.edu or rarkin@ohstm.vsa.bitnet.

present; conversely, the role of effort would be discounted to the extent that substantial ability was perceived to be clearly present (Kelley, 1971).

In more general terms, Kelley (1971) stated the "discounting principle" as follows: "the role of a given cause in producing a given effect is discounted if other plausible causes are also present" (p. 8). Concerning failure, then, the obvious, unmistakable perceived presence of lack of effort would tend to discount perceived lack of ability as a cause, and the obvious perceived presence of lack of ability would tend to discount perceived lack of effort as a cause.

Surber (1984) found that some individuals tended to follow this Heiderian (1958) logic, whereas others ignored it and, instead, perceived ability and effort as positively related. From time to time, one or another individual difference variable (e.g., achievement motivation) has been implicated in explaining such individual differences in use of this Heiderian logic (e.g., Nicholls, 1984, 1986; Touhey & Villemez, 1980). However, a sensible candidate, arising from research on the attributional pattern of mildly depressed individuals, has yet to be examined—depressive affect. The present study examines whether the use of Heiderian logic is moderated by individual differences in depressive affect or dysphoria.¹

Dysphoria and Ability Attributions

In the past decade, a number of studies have revealed marked differences in the attribution processes of dysphoric and nondysphoric individuals (Alloy & Abramson, 1979). Whereas nondysphoric individuals tend to be somewhat unrealistic and self-serving in their attributions, mildly dysphoric individuals tend to be more realistic, a phenomenon termed *depressive realism*, and sometimes referred to as the "sadder-but-wiser" effect (see Alloy & Abramson, 1988).

For instance, nondysphoric people overestimate the degree to which they are responsible for positive events and underestimate their responsibility for negative events; mildly dysphoric people do not (Alloy & Abramson, 1982; Campbell & Fairey, 1985; Kuiper, 1978; Sweeney, Shaffer, & Golin, 1982). In numerous studies, mildly dysphoric individuals have been more likely than nondysphoric individuals to attribute failures and setbacks to their own presumed incompetence (Peterson & Seligman, 1984) and, not surprisingly, to feel more pessimistic and hopeless about the future (Alloy & Ahrens, 1987). The attributional style of nondysphoric individuals is a sharp contrast to the attributional style of mildly dysphoric individuals. Nondysphoric individuals engage in the self-serving bias, blaming the situation for failures while taking personal credit for successes, and viewing themselves as generally better than average (e.g., Weary & Arkin, 1981).

The tendency of mildly dysphoric individuals to make accurate rather than self-serving judgments extends to the perception of events as they occur as well as to attributions about the past and predictions about the future. For instance, Alloy and Abramson (1979) found that mildly dysphoric individuals were quite accurate in their judgments of control over a task; it was the nondysphoric individuals whose judgments were distorted (they exaggerated the extent of their control). In a variety of

ways, mildly dysphoric individuals seem realistic in their thinking about factors governing ongoing activities (Strack & Coyne, 1983).

Present Investigation

Mildly dysphoric individuals are often characterized as tending to dwell excessively on features of their past, present, and future lives (Pyszczynski & Greenberg, 1987), as self-obsessed or self-preoccupied, and even as sinking into the self completely (e.g., Beck, 1967). In addition, it has often been noted that dysphoric individuals tend to be especially critical of themselves and to engage constantly in social comparisons and comparisons of themselves with unrealistic and unattainable standards (Abramson & Sackheim, 1977; Beck, 1967). This sort of vigilance could be an etiological factor in making individuals cognitively vulnerable to dysphoria (Kuiper & Higgins, 1985). Alternatively, dysphoria may predispose individuals toward a high level of vigilance and self-examination.

Regardless, the cognitive vigilance, coupled with an excessive preoccupation with the question of self-worth (Beck, 1967; A. Miller, 1981), may produce a careful examination of one's own contribution to events. This close scrutiny of events, in particular their self-relevance, might lead mildly dysphoric individuals to assess causes—at least causes that are within the realm of the self—in a starkly logical or rational way. One illustration might be a tendency to apply Heiderian logic about the relationship of effort and ability more strictly than would nondysphoric individuals. For instance, when successful, mildly dysphoric individuals might be more likely than nondysphoric individuals to discount their ability as a cause, particularly when they expend considerable effort. By contrast, nondysphoric individuals, being less self-preoccupied, are attentionally focused on features of the situation. The nature of the outcome, characteristics of the task, and other non-self-relevant cognitions (e.g., pleasure taken in the positive outcome), tend to command the attention of nondysphoric individuals. This lack of self-preoccupation may free nondysphoric individuals to engage un-self-consciously in a sort of self-serving bias by attributing their successes to their abilities, even when they expend considerable effort.

Study 1

Study 1 investigated dysphoric individuals' tendency to show an attributional style representing this ability-effort tradeoff,

¹ This article does not examine clinical depression or the attributions of clinically depressed individuals. Instead, it examines the attributions of individuals who are and are not experiencing relatively extended periods of sad affect or mild unhappiness. Other researchers have used the terms *mild* or *subclinical* depression to refer to individuals reporting these symptoms. However, to avoid confusion with clinical depression and because there is evidence that clinically depressed individuals are qualitatively different from subclinically depressed and nondepressed individuals (Buchwald, Coyne, & Cole, 1978; Coyne & Gotlib, 1983; Depue & Monroe, 1978; see Vredenburg, Flett, & Krames, 1993, for an alternative perspective), we elected to use the term *mild dysphoria* to describe these individuals.

or discounting tendency, in the context of activities with which subjects have direct experience and would find important in their daily lives. Ratings of ability and effort were obtained through a survey of activities common and personally important to subjects. All subjects, dysphoric and nondysphoric alike, are likely to invest the greatest effort in activities for which success is most likely (Brehm, Wright, Solomon, Silka, & Greenberg, 1983; Feather, 1982), and success is most likely for activities in which ability is high. Therefore, we predicted that, contrary to Heiderian logic, both dysphoric and nondysphoric subjects would rate themselves as having high ability on activities for which they exerted high effort and low ability on activities for which they exerted low effort. However, for reasons stated earlier, we predicted that the ability attributions of dysphoric and nondysphoric individuals would diverge for activities on which they reported investing a great deal of effort. Specifically, for activities receiving high effort we predicted that the greater self-scrutiny of dysphoric subjects would lead them to discount their abilities. As a result, dysphoric subjects would report less ability than nondysphoric subjects on activities on which they exerted a great deal of effort.

Method

Subjects were drawn from an initial pool of 100 introductory psychology students who volunteered to complete several questionnaires, including the Beck Depression Inventory (BDI; Beck, 1967). We used the BDI because it is a widely used, easy to administer, and relatively comprehensive self-report instrument designed to measure the intensity of depressive symptoms (Shaver & Brennan, 1991). Although the BDI is often used as a screening instrument to aid in the diagnosis of depression, our sample was drawn from a college population that, as far as we know, met no other criteria for depression. Consequently, we chose to label subjects receiving higher scores on the BDI as *dysphoric* rather than depressed (see Kendall, Hollon, Beck, Hammen, & Ingram, 1987). That is, we assumed that high scores reflected relatively extended periods of sad affect and not necessarily a major depressive disorder.

From the initial pool of 100, data from the 65 subjects (32 men, 33 women) representing the upper and lower thirds of the distribution according to their scores on the BDI were included in the present study. Subjects within the uppermost third of the distribution ($n = 32$) received scores of 11 or higher on the BDI ($M = 16.6$); subjects within the lowest third of the distribution ($n = 33$) received scores of 5 or lower on the BDI ($M = 2.9$). Women ($M = 11.0$) scored slightly higher on the BDI than did men ($M = 8.2$); however, this difference was not significant, $t(63) = 1.4, p > .16$. More important, women were not more likely than men to be classified in the dysphoric group, $\chi^2(65) = 1.87, ns$. Finally, preliminary analyses revealed no reliable main effects or interactions involving sex. Consequently, subsequent analyses collapsed across sex of subjects.

Subjects received a questionnaire listing 50 daily activities in which the typical undergraduate might participate. Example activities listed on the questionnaire included "meeting new people," "writing a term paper," and "playing a musical instrument." Subjects were instructed to read through the complete list and to select the 10 activities that they perceived as most important to them personally. Next, subjects were asked to make two estimates for each of the 10 activities they selected. First, using a 9-point scale, subjects estimated the amount of effort they typically put forth when engaged in the activity (1 = *very little effort* and 9 = *extreme amount of effort*). Second, subjects estimated their ability level on each of the 10 activities (1 = *very little ability*; 9 = *extreme amount of ability*).

Results

Preliminary analyses revealed no difference between dysphoric ($M = 6.5$) and nondysphoric ($M = 6.8$) subjects in the amount of effort they reportedly exerted on the tasks they selected, $t(63) = 1.35, p > .15$. However, dysphoric subjects ($M = 6.7$) reported having significantly less ability than did nondysphoric subjects ($M = 7.1$) on the tasks selected, $t(63) = 2.18, p < .05$.

Notwithstanding this difference, the primary purpose of this research was to examine whether the relationship between ability and effort on self-selected tasks was moderated by dysphoria. To examine this question, data were analyzed using simultaneous regression procedures in which depression (high vs. low) was treated as a categorical variable, the effort estimates were treated as a continuous repeated measure, and the ability estimates corresponding to each of the effort estimates were treated as the dependent measure.

Analysis revealed a significant effect of effort, $F(1, 583) = 72.16, p < .0001$. The effect of effort, however, was qualified by a significant interaction of dysphoria and effort, $F(1, 583) = 4.43, p < .05$. To identify the nature of the interaction, effort was entered as a predictor of ability in two separate regression analyses: one for dysphoric subjects and one for nondysphoric subjects. The resulting regression coefficients ($\beta = .278$ for dysphoric subjects; $\beta = .426$ for nondysphoric subjects) were then used to compute estimate scores for dysphoric and nondysphoric subjects at points one standard deviation above and below the mean effort score (see Cohen & Cohen, 1983).

The regression lines corresponding to the estimate scores for dysphoric and nondysphoric subjects are plotted in Figure 1. Both groups of subjects rated themselves as having low and relatively equal ability on tasks in which they exerted low effort. By contrast, on tasks in which they exerted high effort, dysphoric and nondysphoric subjects diverged: Nondysphoric subjects rated themselves as having greater ability than did dysphoric subjects.

The primary purpose of this research was to examine the perceived relationship between ability and effort among individuals reporting extremely high versus extremely low levels of dysphoria. Our findings reveal that the perceptions of dysphoric and nondysphoric individuals differ, with nondysphoric individuals reporting greater correspondence between perceived ability and perceived effort than dysphoric individuals. An important question that has yet to be addressed is how the responses of these extreme subjects compare with the responses of nonextreme subjects—that is, subjects who are neither extremely dysphoric nor extremely nondysphoric. On the one hand, there is evidence that responses of nondysphoric subjects may be atypical. Specifically, Taylor and Brown (1988) have noted that nondysphoric individuals tend to possess positive illusions about themselves and to perceive events and make attributions in self-serving ways. Alternatively, it is possible that it is the perceptions of dysphoric subjects that are atypical. That is, dysphoric subjects may be overly conservative in their perceptions, ascribing less ability to themselves than circumstances would warrant. Finally, it is possible that a linear relationship exists between dysphoria and perceptions of ability and effort and that the re-

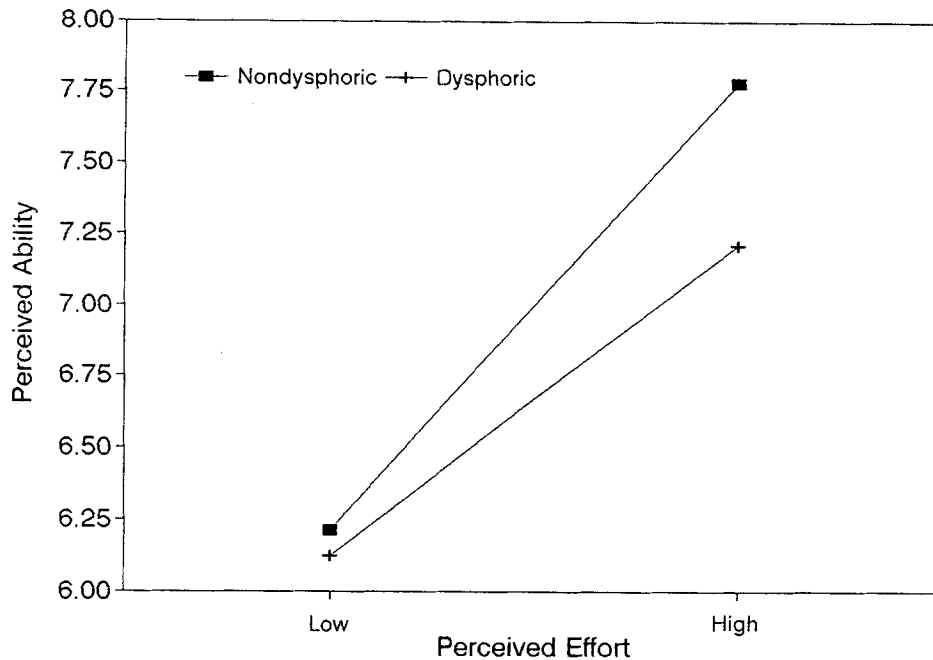


Figure 1. Ability ratings of dysphoric and nondysphoric subjects on tasks for which they rated their effort as either high or low. The statistical interaction of depression and judged effort was significant ($p < .05$, see text).

sponses of subjects at both extremes diverge from the responses of nonextreme subjects.

To examine these possibilities, we reanalyzed the data including a third group of subjects, those scoring in the middle third on the BDI. The analysis once again revealed a significant effect of effort, $F(1, 897) = 110.76, p < .001$, qualified by a marginally significant interaction of dysphoria and effort, $F(2, 897) = 2.44, p < .09$. When effort was entered as a predictor of ability in a separate regression analysis for this middle group, the resulting regression coefficient ($\beta = .296$) resembled most closely the regression coefficient for dysphoric subjects. In summary, it appears that it is the perceptions of nondysphoric subjects that diverge from the norm, and not the perceptions of dysphoric subjects.

In addition to the analyses described above, we computed the within-person correlation between the 10 ability and 10 effort ratings generated by each participant. This provided an index of the degree to which effort and ability covaried for each participant. We then treated the within-subject correlations as data in a traditional between-subjects analysis in which dysphoria (high, moderate, and low) was treated as the predictor and the correlations between ability and effort were treated as the dependent measure.² Presumably because of the high variability associated with computing correlations on small samples, the analysis of mean correlations revealed no differences across the different levels of dysphoria, $F(2, 97) < 1$. Nevertheless, the mean correlation between perceived effort and perceived ability was higher among nondysphoric subjects ($M = .40$) than dysphoric subjects ($M = .30$). In addition, the effort-ability correlation for moderately dysphoric subjects ($M = .31$) more closely

resembled that of dysphoric subjects than nondysphoric subjects.

Discussion

As anticipated, subjects generally perceived themselves as having higher ability on tasks for which they expended greater effort. This covariation of ability and effort ascriptions, although contrary to Heiderian logic, is consistent with theory (Anderson & Slusher, 1986; D. T. Miller & Ross, 1975; Tetlock & Levi, 1982) and research (Cervone & Peak, 1986) on causal attribution for events. The finding is also consistent with general theories of motivation (e.g., expectancy, energization, and achievement motivation), which observe that effort is ordinarily deployed on tasks for which a successful outcome is likely (e.g., Brehm et al., 1983; Feather, 1982). If ability is judged sufficiently high to achieve some end, then effort may also be present; if ability is judged insufficiently high to achieve some end, effort would be absent. This would tend to ensure that a positive correlation between effort and ability would be observed in everyday life. That is, people reserve effort for tasks in which they perceive success as likely, and they perceive success as likely if they judge their ability to be high.

Notwithstanding the general positive relationship between perceived effort and ability, this trend was clearly moderated by subjects' level of dysphoria. Dysphoric subjects perceived them-

² We thank an anonymous reviewer for suggesting this analysis strategy.

selves as having less ability on high effort activities than did nondysphoric subjects. Thus, this study shows that dysphoric and nondysphoric subjects do differ in the judged relationship between ability and effort.

At the same time, the general positive relationship between perceived effort and ability in daily life would seem to ensure that any naturalistic field test of the hypothesis is likely to produce a modest statistical interaction. That is, the self-selection of personally important tasks likely resulted in all subjects, dysphoric and nondysphoric alike, selecting tasks for which they typically exert high effort and typically evince high ability. All subjects, dysphoric and nondysphoric alike, did select as personally important tasks for which they also rated both their effort and their ability as moderately high (i.e., both means above 6.5 on a 9-point scale). In a more controlled context, subjects could be assigned a task or tasks for which there is no implicit or explicit relationship between effort and ability. Furthermore, a controlled context would preclude self-selection of a task or tasks that reflect the clear presence of ability. The following experiment was designed to achieve these objectives.

Finally, to permit the most sensitive test of Heiderian logic, which proposes that attributions to high effort following a successful performance preclude attributions to high ability, we used a dependent measure (following Shrauger & Osberg, 1980) that places attributions to ability and attributions to effort at the opposite ends of a continuum. A forced choice such as this seems common in everyday life (e.g., attributing the athleticism of an athlete the calibre of Michael Jordan to a "gift" rather than practice; the artistic gifts of a poet, etc.), albeit less common than circumstances in which ability and effort assessments are free to vary independently.

Therefore, we expected that Study 2 would provide support for the stronger version of the hypothesis, namely that dysphoric subjects would not only be less inclined than nondysphoric individuals to perceive ability and effort as positively correlated, but that dysphoric subjects might actually perceive high effort as indicative of low levels of ability.

Study 2

To provide a test of the moderating effects of dysphoria, subjects in Study 2 were induced to perceive their effort as high or low in two different ways. First, subjects were encouraged to become either more or less involved in the task, by expending considerable effort toward performing well or by withholding their energy instead. Second, subjects were informed that their practice during a warm-up phase, prior to the task, was considerable or sub-par. We predicted that dysphoric individuals would tend to discount their ability as an explanation of successful performance when their effort was perceived as high rather than low and that nondysphoric individuals would not.

Method

Subjects

Eighty-four introductory psychology students (44 women, 40 men) participated in partial fulfillment of a class requirement. On arriving for the experiment, subjects completed the Beck Depression Inventory

(Beck, 1967), the Rosenberg Self-Esteem Scale (Rosenberg, 1965), the State-Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970), and a variety of scales irrelevant to the purposes of the present study. Subjects were contacted by phone and scheduled to participate individually or in groups of two or three persons.

Procedure

After arriving for the experimental session, subjects sat in chairs separated by partitions. They were asked to don headphones, and were told they would receive all their instructions through the audiosystem. Subjects then received standardized, recorded instructions that described the study as an investigation concerned with how college students solve problems involving both verbal and numerical associations. They were told that one feature of the investigation concerned how students on their own campus compared with students at nearby universities.

The types of problems were described next, and examples of both the verbal and numerical associations were provided. For instance, the example of the numerical association task involved the sequence 2, 4, 6, 8, 10 and noted that the most logical number to complete the sequence would be 12. Subjects were told that they would always be given a sequence of five such numbers, and would be asked to designate the next logical number in the sequence. For the verbal associations, three related words (e.g., height, rungs, climb) were provided and the subjects' task was to indicate a term that described how the stimulus words were related (e.g., ladder).

Practice opportunity. Following the description of the task and the sample problems, subjects were told they would be given an opportunity to familiarize themselves with such problems and warm up to the task. They were told that the problems were somewhat unusual and that most participants probably did not have a great deal of experience with word and number associations of that type. Subjects were told that they could practice as long as they wished, stopping whenever they felt comfortable with the task and ready to begin the actual test. They were not provided with any answer key for the practice problems. They were told to stop the standardized tape while they practiced. When finished practicing and ready to begin the test, they could place the practice sheets under their desk, where the main test was stored, and begin the actual test whenever ready. The practice sheets included 40 verbal and 40 numerical associations. (Unknown to the subjects, the amount of time spent practicing was recorded by the experimenter.) Finally, subjects were told to resume the taped instructions when they broke the seal on their test and were preparing to begin.

When the tape resumed (following the practice period), subjects were told they would have 5 min to complete as many problems on the test as possible. They were told that the experimenter would collect the tests and score them at the end of that period.

Effort expenditure manipulation. To induce variations in effort expenditure, subjects received instructions designed to inspire greater or lesser involvement in the task. Subjects receiving the high-effort treatment were told,

We are interested in how number and word estimations turn out when people put the greatest amount of effort into the task. So, it would really be a help to us if you would really bear down on these tasks and give them everything you have for the next five minutes. Try to close everything else out of your mind. For example, you might imagine that your final grade in an important class was determined solely by your performance on these tasks. So, please give these problems all the effort you can muster.

Subjects assigned to the low-effort treatment were told,

We are interested in how well people perform when they don't put their greatest effort into a task. So, it would really be a great help to

us if you could stay fairly relaxed when you work these problems during the next five minutes. We want you to work, certainly, but we don't want you to work as though these problems are the end of the world. For example, you might imagine that you are teaching number and word associations to school children. Since you would already know more than they do, you could stay fairly relaxed if you were playing a game against the children because you would probably win, no matter what. That is the sort of approach we want you to take toward these problems.

These high-effort and low-effort instructions were taken from Touhey and Villemez (1980). Finally, the remaining one third of the subjects were given no instructions concerning how much effort to expend in completing the test. They were merely reminded to complete each problem before continuing on to the next item. All subjects were told that, even if not entirely sure of an answer, they should provide their best guess. The standardized taped message prompted subjects to begin at the sound of a tone and to stop when another tone indicated that five minutes had elapsed.

After all subjects had completed their tests, the experimenter collected their answer sheets and retreated to a cubicle where he appeared to score the forms. After several minutes the experimenter returned and distributed a "feedback sheet" to each of the subjects. For all subjects, the outcome feedback was indicated prominently at the top of the page. All subjects received feedback indicating that they had been quite successful at the task. This was achieved by indicating in separate rows the subject's actual number of correct answers, as well as the average score for previous participants. This "average score" was calculated by subtracting 4.4 from the subject's actual score.

Practice effort expenditure manipulation. To induce variations in perceived effort expenditure on the practice problems, subjects received further information that indicated the amount of time they spent practicing as well as the average amount of time spent practicing by the other participants prior to that session. Subjects' actual practice time was entered on one row of the form. One third of the participants were informed that the average amount of time spent practicing was about one half their own practice time. One third were informed that the average amount of time spent practicing was nearly twice their own practice time. Finally, one third were given no information about the average practice time at all.

Dependent measures. As subjects perused their feedback the experimenter left briefly and then returned with the posttest questionnaire. Embedded in the 10-item posttest questionnaire were 4 items, 3 of which constituted manipulation check items; the 4th was the main dependent measure. To check on the practice effort induction, subjects were asked to estimate the percentage of students who practiced longer than they had. To check on the effort expenditure induction, subjects in the experimental conditions were asked whether they had been asked to try hard on the task or not; control subjects were not asked this question, as it would have made no sense to subjects who had received no such information. Subjects were also asked to estimate the amount of success they had on the test. This item was included to ensure that subjects perceived the outcome of their performance as successful. Finally, following the example of Shrauger and Osberg (1980; see also Feather, 1969), the main dependent measure was a 20-point scale that asked subjects to indicate the extent to which they attributed their (successful) performance *mainly to ability* (1) or *mainly to effort* (20). Placing ability and effort at opposite ends of a single continuum precludes simultaneous attributions of high ability and high effort and controls for the natural tendency demonstrated in Study 1 for subjects to perceive ability and effort as positively related.

Results

Although women had slightly higher BDI scores ($M = 8.7$) than men ($M = 6.9$), this difference was not significant, $t(82) =$

1.06. Similar to Study 1, preliminary analyses revealed no significant main effects or interactions involving sex on the main dependent measure or manipulation check items. The only significant effect of subjects' sex was an unexpected main effect on the measure of subjects' performance on the test, $F(1, 80) = 5.02$, $p < .03$. Women scored significantly better on the test ($M = 14.30$) than men ($M = 12.60$). Because this was the only significant effect to emerge, subsequent analyses were collapsed across sex. Finally, preliminary analysis revealed no difference in BDI scores across experimental conditions, $F(8, 75) = 1.06$.

The purpose of Study 2 was to examine the effects of dysphoria on attributions at different levels of perceived effort expenditure. In previous research, self-esteem has accounted for variation in attributional style, with dysphoria adding little beyond the contribution of self-esteem (Pelham, 1991; Tennen & Herzberger, 1987). In addition, some researchers have proposed that differences in behavior attributed to dysphoria may actually result from individual differences in a correlated emotion, namely anxiety (Smith & Rhodewalt, 1991). Because the data were available, and the predictions concerned the influence of dysphoria specifically and independently of self-esteem and anxiety, self-esteem and anxiety were included in the analyses as covariates.

Data for each measure were analyzed using hierarchical multiple regression. The covariates were included in the model in a manner recommended by Hull, Tedlie, and Lehn (1992). Specifically, the covariates were entered into the model first followed by the scores on the Beck Depression Inventory (1967), the effort expenditure instructions (high effort, low effort, and no information), and the practice effort expenditure instructions (high effort, low effort, and no information) in that order. Next, to enter the model were all two-way interactions involving the covariates and the two effort manipulations, followed by the two-way interactions of Dysphoria \times Effort Expenditure Instructions, Dysphoria \times Practice Effort Instructions, and Effort Expenditure Instructions \times Practice Effort Instructions, in that order. Next, the two three-way interactions involving the covariates and the two effort manipulations (i.e., Self-Esteem \times Effort Expenditure Instructions \times Practice Effort Instructions, and Anxiety \times Effort Expenditure Instructions \times Practice Effort Instructions) were entered into the model. Finally, the three-way interaction of Dysphoria \times Effort Expenditure Instructions \times Practice Effort Instructions was entered into the model.

Means and Standard Deviations of Personality Measures

The relevant measures of central tendency and variability for both the Rosenberg Self-Esteem Scale ($M = 39.1$, $SD = 5.9$; range = 23–50), the Spielberger State-Trait Anxiety Inventory (STAI; $M = 41.7$, $SD = 9.2$; range = 20–73), and the BDI ($M = 7.9$, $SD = 7.6$; range = 0–35) were quite comparable to previous research.³ The BDI and the Rosenberg Self-Esteem Scale were

³ Because the distribution of scores on the Beck Depression Inventory (1967) is typically skewed (e.g., Tennen & Herzberger, 1987), additional analyses involving various data transformations (e.g., square root transformation) were performed on the main dependent measure and the manipulation check items. This procedure did not alter any of the findings meaningfully or significantly.

strongly correlated ($r = -.51$), as were the BDI and the STAI ($r = .74$). To control for the problem of multicollinearity associated with the high correlation between the BDI and the two covariates, all three measures were transformed into deviation scores prior to analysis. That is, the mean BDI score was subtracted from each subject's raw BDI score, the mean self-esteem score was subtracted from each subject's raw self-esteem score, and the mean anxiety score was subtracted from each subject's raw anxiety score. The deviation scores were then substituted for the raw scores in all analyses. Although using deviation scores in place of raw scores has no effect on the inferential statistics (e.g., the F ratio), it is necessary to provide unbiased estimates of the regression coefficients.

Although the correlations between dysphoria and self-esteem and anxiety are considerable, we believe dysphoria taps something unique. Self-esteem reflects cognitions or attitudes about the self; anxiety reflects trepidation or apprehension over anticipated bad events. With the effect of these two covariates removed, what remains are negative feelings over bad events that have already transpired.

Manipulation Checks

Subjects all rated their performance as successful (grand $M = 68.7$); scale endpoints for this item were *no success* (0) and *outstanding success* (100). Furthermore, no significant main effects or interactions emerged on this item. Regardless of the effort expenditure information, or subjects' dysphoria scores, all subjects seemed to interpret the success outcome in the same way.

Every subject in both the high and low effort expenditure instructions conditions correctly indicated the amount of effort they had been asked to exert. Concerning the practice effort induction, a significant main effect emerged on the manipulation check that inquired about the percentage of students who practiced longer than the subject had practiced, $F(2, 48) = 9.76, p < .001$. Subjects in the high practice effort condition reported that a low percentage of other subjects spent more time working on the practice problems ($M = 29.0\%$) than they had spent themselves; subjects in the no information ($M = 46.2\%$) and the low practice effort conditions ($M = 55.5\%$) reported that a higher percentage had spent more time working on the practice problems than they had spent themselves. No other significant effects emerged in the analysis of the responses to this item.

Finally, dysphoria was unrelated to the actual amount of time spent practicing ($F < 1$) and to subjects' scores on the test ($F < 1$).

In summary, the necessary conditions for testing the hypotheses concerning effort versus ability attributions appear to have been met.

Attribution Measure

The primary dependent measure involved subjects' ratings of ability versus effort as causes of the performance outcome. As anticipated, analysis revealed a significant three-way interaction of dysphoria, effort expenditure instructions, and practice effort instructions, $F(4, 48) = 3.03, p < .03$. No other main

effects or interactions were significant. Analyses of the simple effects using the procedures described in Study 1 revealed that the significant three-way interaction was attributable solely to subjects in the high effort expenditure, high practice effort condition ($p < .03$). No other simple effects comparison was significant.

We used the procedures described in Study 1 to compute estimate scores for points one standard deviation above and below the mean BDI score. To simplify the presentation and because no other simple effects were significant, Figure 2 displays the regression plots from subjects in the three high effort instructions conditions only. As can be seen in Figure 2, dysphoric subjects who were told to exert great effort, and who were led to believe they had practiced extensively, attributed their success primarily to their effort (rather than ability). By contrast, the nondysphoric subjects in the same condition attributed their performance primarily to their ability (rather than effort).

Discussion

The difference between the dysphoric and nondysphoric subjects in the judged relationship between ability and effort reveals distinct ways of using information to make inferences. As predicted, dysphoric participants focused on their effort as the explanation for their performance outcome when their effort expenditure was considerable (i.e., instructions to expend effort coupled with feedback indicating considerable practice). In attributional terminology, they discounted ability (Kelley, 1971) as an explanation for their successful performance when the success was achieved with great exertion. By contrast, nondysphoric participants were most likely to attribute their successful performance to ability in precisely the same circumstances (i.e., when the success was achieved with great exertion).

The judgments of the dysphoric individuals seem sensible. That is, the use of the discounting principle (Kelley, 1971) is an extension of Heider's (1958) logic of an inverse relationship between ability and effort, and the Heiderian notion is based on Heider's ideas about "common sense" interpretations of events. The discounting of the dysphoric individuals reflects a fairly strict application of these rules of logic and is consistent with the depressive realism repeatedly uncovered in previous research (Alloy & Abramson, 1988).

This finding has many intriguing implications. For one, it suggests one source of the vicious circle in which dysphoric (and perhaps depressed) individuals seem to find themselves (e.g., Beck, 1967). Ordinarily, depressive affect is thought to be associated with lethargy, feelings of disinterest, and withdrawal. On rare occasions, when dysphoric individuals become highly absorbed in a task and exert a good deal of effort in the pursuit of success, their very activation may serve to make their achievement unreliable from their point of view. A success that is attributable to herculean effort, rather than a more stable entity (in this case, ability), is by definition unstable and unreliable (Weiner, 1980). Unstable attributions for success should provoke anxiety (Arkin & Maruyama, 1979) as well as foster pessimism (Alloy & Ahrens, 1987). This sort of attributional predisposition, or style, could easily promote withdrawal, lethargy, and perhaps feelings of worthlessness. In short, dysphoric indi-

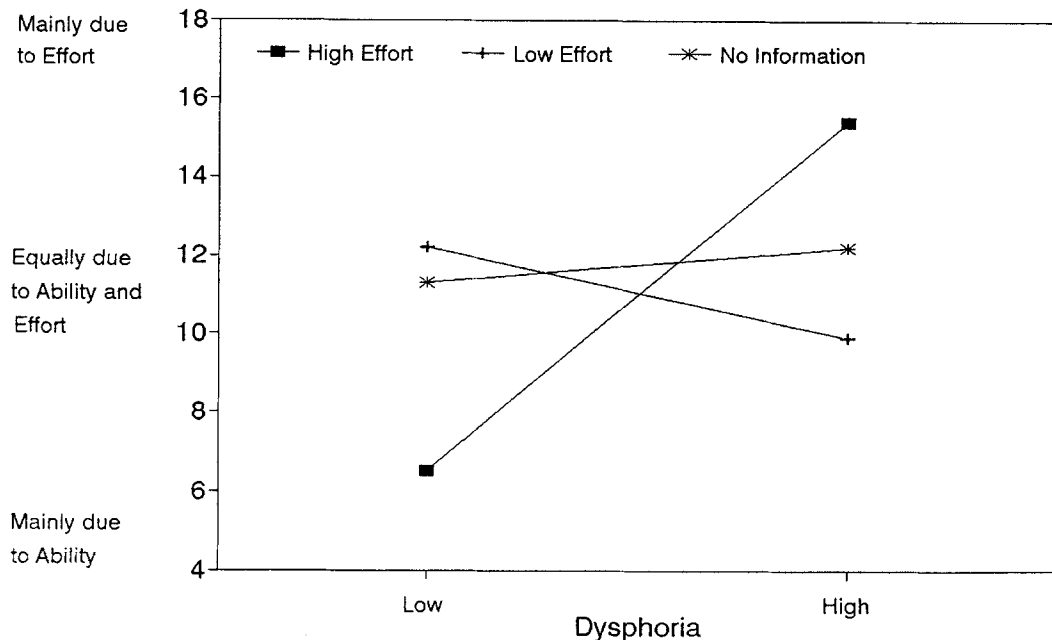


Figure 2. Ability-effort ratings in the high practice effort-high effort expenditure and low practice effort-low effort expenditure conditions compared with the no information conditions. Conditions with mixed information about practice effort and effort expenditure were nonsignificantly different from both the low effort and no information condition means, and are not portrayed here to keep the figure uncluttered.

viduals are caught in a sort of attributional catch-22 (see also Pelham, 1991).

In a sense, the positive relationship between effort expenditure and ability ascriptions among the nondysphoric participants, when the effort expenditure was considerable (i.e., when instructed to expend effort coupled with feedback indicating considerable practice), is an even more intriguing finding. Nondysphoric individuals were most likely to assume personal credit for the successful outcome, by attributing the success to their ability, when they were most personally involved in the task. In spite of the Heiderian logic, then, nondysphoric participants tended to view themselves in a favorable light (Ross & Fletcher, 1985, p. 104).

It is possible that the findings in Study 2 are an artifact of the methodology. Specifically, the effort manipulations may have made effort more salient to dysphoric individuals because high effort is relatively unusual for them. However, Study 1 revealed no difference between dysphoric and nondysphoric individuals in the amount of effort they reported exerting. This finding would suggest that high effort is not unusual for dysphoric subjects, at least on tasks self-selected as important.

Of course, one might also argue that this finding, along with the findings in Study 2 that dysphoric and nondysphoric subjects did not differ in their test performance or in the amount of time spent practicing, is also odd and is inconsistent with the vast literature on learned helplessness demonstrating cognitive and motivational deficits among dysphoric individuals (see Abramson et al., 1978). We note, however, that our procedures differed in several ways from those used in learned helplessness

studies. First, the deficits uncovered by previous researchers typically followed the receipt of failure feedback or work on unsolvable problems. The present research included neither. Indeed, in Study 2, all subjects received success feedback. Second, in Study 1, the activities that subjects rated were self-selected to be personally important. We can think of no obvious reason dysphoric and nondysphoric subjects differ in their effort on self-selected, personally important activities. Finally, the test in Study 2 was unfamiliar to subjects and thus one in which they had little or no prior experience. We believe this served to minimize the effect of prior experience or expectations on performance.

In a review of the literature, D. T. Miller and Moretti (1988) noted that dysphoric and nondysphoric individuals make similar attributions about positive events but diverge in their attributions about negative events. The present study only examined attributions following positive events and found that dysphoric and nondysphoric individuals do differ in their attributions. Although our findings might appear inconsistent with the conclusions of Miller and Moretti, two important distinctions should be noted. First, Miller and Moretti found no effect of dysphoria on the tendency to make internal versus external attributions for positive events. The present study, however, did not compare internal versus external attributions, but instead compared the tendency to make internal attributions that were either stable (ability) or unstable (effort). Second, the bulk of research reviewed by Miller and Moretti varied performance feedback and then examined subsequent attributions. In Study 2, performance feedback was held constant. What varied was subjects'

effort during the test and on the practice task. Thus, rather than being inconsistent with Miller and Moretti, our findings seem to extend their review by revealing that dysphoria moderates the stability of attributions for positive outcomes.

This evidence that dysphoria serves as a moderating variable in the making of ability and effort attributions provides possible clarification of the opposing perceptions of the relationship between ability and effort found by Surber (1984). However, there are certain limitations to the present study. First, because this is an unfamiliar setting for the participants, the situation may provide strong motivation for people who are predisposed to greater cognitive vigilance (i.e., dysphoric individuals) to use Heiderian logic in assessing their performance. Second, although the bipolar scale anchored by "mostly due to ability" and "mostly due to effort" used as the primary dependent measure here is common in research, it suffers from a valid criticism. As indicated by Study 1, people may not naturally consider ability and effort on the same underlying continuum. Therefore, the question becomes one of discerning the robustness of the effect. That is, does this pattern, in which nondysphoric individuals view ability and effort as positively related and dysphoric individuals perceive ability and effort as negatively related, affect conceptions of self and ability on everyday personal activities? The findings from Study 1, in which subjects freely chose their activities and selected ones that were important, suggest that the magnitude and generality of the findings from Study 2 must indeed be qualified. That is, under conditions in which important activities were freely chosen, dysphoric individuals did not report a negative relationship between ability and effort. Instead, the data were clear in showing that a generally positive relationship between effort and ability was merely attenuated.

General Discussion

Taken together, these studies provide converging evidence that dysphoric individuals tend to discount the role of ability in explaining causes for positive performance outcomes. Both studies, although using radically different methodological approaches, provide evidence for this general pattern. That is, although both dysphoric and nondysphoric individuals perceive ability and effort as positively related, dysphoric individuals who perceive a high degree of expended effort, either through experimental manipulation or through private assessment, provide relatively lower ability attributions than their nondysphoric counterparts when explaining successful performance on both an unfamiliar task and on daily activities of some importance.

A variety of consequences for feelings of the self and one's role in everyday life may arise from the divergent conceptions of the ability-effort relationship of dysphoric and nondysphoric individuals. The attributional style of the dysphoric individuals may have negative implications for their feelings of self-worth because viewing success on valued tasks in the presence of high effort as indicative of only moderate ability undermines the "boost" to self-esteem derived from a stable and internal causal attribution for success. Indeed, there is some evidence that unstable attributions (e.g., attributions to effort) for positive out-

comes may be a source of depressive affect (Golin, Sweeney, & Shaffer, 1981). Attributing success to high effort could also lead to perceptions that success is possible only when one expends a great deal of effort. When unable or unmotivated to undertake this extensive effort, success is in doubt.

The divergent perceptions of ability and effort among dysphoric and nondysphoric individuals may reflect different conceptions of the meaning of ability itself among dysphoric and nondysphoric individuals (e.g., Dweck & Leggett, 1988; Nicholls, 1984, 1986). Ability can be conceptualized either as a stable trait (an entity, bounded and limited in capacity) or as a continuously growing and developing set of skills (Nicholls, 1984, 1986). In the case of capacity-ability (also called a helplessness orientation; Dweck & Leggett, 1988), one would expect a negative relationship between perceptions of ability and effort. With mastery-ability, perceptions of ability and effort would be positively related. Consistent with a mastery-ability orientation, Study 2 revealed that nondysphoric individuals inferred greater ability when they believed they exerted high effort (see also Baumgardner & Levy, 1988). By contrast, consistent with a capacity-ability orientation, dysphoric individuals inferred less ability when they believed they exerted high effort. Indeed, there was a nonsignificant tendency for dysphoric individuals to infer greater ability when they believed they exerted low effort, a finding consistent with other research on the capacity-ability orientation (see Dweck & Leggett, 1988, for a review).

Perhaps an excessive investment in the question of self-worth leads dysphoric individuals to focus on ability as a well-defined, limited capacity and to assess their own level of competence chronically. Alternatively, a tendency to view ability as a well-defined, limited capacity might result in an excessive investment in the question of self-worth and, consequently, dysphoria. The literature shows that dysphoric persons tend to be especially critical of themselves and to engage constantly in social comparisons and in comparisons of themselves with unrealistic and unattainable standards (e.g., Abramson & Sackheim, 1977). This sort of vigilance could be a reflection of their conception of ability as a limited, or bounded, capacity or it could be a cause. Ordinarily, theorists have assumed that maladaptive thought processes tend to produce maladaptive ability inferences (e.g., Beck, 1967), but this capacity-ability interpretation would suggest that the reverse could also be true (Dweck & Leggett, 1988).

Although dysphoric individuals may concentrate on the limits of their abilities, nondysphoric individuals may concentrate not on how much ability they possess, but instead on how much ability they can express. In this conception, one's abilities can be best expressed, or revealed, when one expends effort (Dweck & Bempechat, 1983). In fact, the general tendency found in Study 1 for all subjects to express a greater assessment of ability on activities in which they expended a great deal of effort may have some bearing on this issue. From the present data it is impossible to discern whether subjects invest a great deal of effort on tasks in which they feel they have a greater degree of ability, or alternatively, perceive a greater degree of ability on those activities in which they have invested a great deal of effort. However, it seems quite reasonable, in an adaptive sense, to perceive

expending of effort on a valued task as a means by which ability can be expressed.

This discussion of different conceptions of ability, mastery versus capacity, suggests future directions for research. Often, the conception of ability in the literature is limited to the realm of intellectual capabilities. However, as the present two studies begin to convey, there is a wide range of abilities and types of activities that people may value and that may reflect on feelings of self-worth. Future research could perhaps elucidate the antecedents or consequences of dysphoria and its interaction with the types of goals, tasks, and activities in which dysphoric versus nondysphoric individuals choose to engage. It would be interesting to see how dysphoric and nondysphoric individuals differ in selection of routine and challenging activities and to examine how their selection strategy would then affect their perceptions of self and to explore whether dysphoria is related to these divergent conceptions of ability.

In any event, for the mildly dysphoric individual, a disproportional investment in the question of self-worth could promote the application of Heiderian logic that undermines ability attributions. The precise process (vigilance, depressive realism, ability conceptions) will have to await further research. The specific answers are sure to be compelling both from a theoretical and practical standpoint.

References

- Abramson, L. Y., & Sackheim, H. A. (1977). A paradox in depression: Uncontrollability and self-blame. *Psychological Bulletin*, *84*, 838-851.
- Abramson, L. Y., Seligman, M. E. P., & Teasdale, J. D. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology*, *87*, 49-74.
- Alloy, L. B., & Abramson, L. Y. (1979). Judgment of contingency in depressed and nondepressed students: Sadder but wiser? *Journal of Experimental Psychology: General*, *108*, 441-485.
- Alloy, L. B., & Abramson, L. Y. (1982). Learned helplessness, depression, and the illusion of control. *Journal of Personality and Social Psychology*, *42*, 1114-1126.
- Alloy, L. B., & Abramson, L. Y. (1988). Depressive realism: Four theoretical perspectives. In L. B. Alloy (Ed.), *Cognitive processes in depression* (pp. 223-265). New York: Guilford Press.
- Alloy, L. B., & Ahrens, A. H. (1987). Depression and pessimism for the future: Biased use of statistically relevant information in prediction for self versus others. *Journal of Clinical and Consulting Psychology*, *52*, 366-378.
- Anderson, C. A., & Slusher, M. P. (1986). Relocating motivational effects: A synthesis of cognitive and motivational effects on attributions for success and failure. *Social Cognition*, *4*, 270-292.
- Arkin, R. M., & Maruyama, G. M. (1979). Attribution, affect, and college exam performance. *Journal of Educational Psychology*, *71*, 85-93.
- Bandura, A. (1985). *Social foundations of thought and action: A social-cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
- Baumgardner, A. H., & Levy, P. E. (1988). Role of self-esteem in perceptions of ability and effort: Illogic or insight? *Personality and Social Psychology Bulletin*, *14*, 429-438.
- Beck, A. T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: International Universities Press.
- Bowlby, J. (1969). *Attachment and loss* (Vol. 1). London: Hogarth.
- Brehm, J. W., Wright, R. A., Solomon, S., Silka, L., & Greenberg, J. (1983). Perceived difficulty, energization, and the magnitude of goal valence. *Journal of Experimental Social Psychology*, *19*, 21-48.
- Buchwald, A. M., Coyne, J. C., & Cole, C. S. (1978). A critical evaluation of the learned helplessness model of depression. *Journal of Abnormal Psychology*, *87*, 180-193.
- Campbell, J. D., & Fairey, P. J. (1985). Effects of self-esteem and perceptions of conveyed impressions: Is negative affectivity associated with greater realism? *Journal of Personality and Social Psychology*, *58*, 122-133.
- Cervone, D., & Peake, P. K. (1986). Anchoring, efficacy, and action: The influence of judgmental heuristics on self-efficacy judgments and behavior. *Journal of Personality and Social Psychology*, *50*, 492-501.
- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Coyne, J. C., & Gotlib, I. H. (1983). The role of cognition in depression: A critical appraisal. *Psychological Bulletin*, *94*, 472-505.
- Depue, R. A., & Monroe, S. M. (1978). Learned helplessness in the perspective of the depressive disorders: Conceptual and definitional issues. *Journal of Abnormal Psychology*, *87*, 3-20.
- Dweck, C. S., & Bempechat, J. (1983). Children's theories of intelligence. In S. Paris, G. Olsen, & H. Stevenson (Eds.), *Learning and motivation in the classroom* (pp. 239-256). Hillsdale, NJ: Erlbaum.
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256-273.
- Epstein, S. (1984). Controversial issues in emotion theory. In P. Shaver (Ed.), *Review of personality and social psychology: Emotions, relationships, and health* (pp. 64-88). Beverly Hills, CA: Sage.
- Feather, N. T. (1969). Attribution of responsibility and valence of success and failure in relation to initial confidence and task performance. *Journal of Personality and Social Psychology*, *13*, 129-144.
- Feather, N. T. (1982). *Expectations and actions: Expectancy-value models in psychology*. Hillsdale, NJ: Erlbaum.
- Golin, S., Sweeney, P. D., & Shaeffer, D. E. (1981). The causality of causal attributions in depression: A cross-lagged panel correlational analysis. *Journal of Abnormal Psychology*, *90*, 14-22.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Hull, J. G., Tedlie, J. C., & Lehn, D. A. (1992). Moderator variables in personality research: The problem of controlling for plausible alternatives. *Personality and Social Psychological Bulletin*, *18*, 115-117.
- Kelley, H. H. (1971). Attribution in social interaction. In E. E. Jones, D. E. Kanouse, H. H. Kelley, R. E. Nisbett, S. Valins, & B. Weiner (Eds.), *Attribution: Perceiving the causes of behavior* (pp. 1-26). Morristown, NJ: General Learning Press.
- Kendall, P. C., Hollon, S. D., Beck, A. T., Hammen, C. L., & Ingram, R. E. (1987). Issues and recommendations regarding use of the Beck Depression Inventory. *Cognitive Therapy and Research*, *11*, 289-299.
- Kuiper, N. A. (1978). Depression and causal attributions for success and failure. *Journal of Personality and Social Psychology*, *36*, 236-246.
- Kuiper, N. A., & Higgins, E. T. (1985). Social cognition and depression: A general integrative perspective. *Social Cognition*, *3*, 1-13.
- Marris, P. (1975). *Loss and change*. Garden City, NY: Anchor/Double-day.
- Miller, A. (1981). *The drama of the gifted child: The search for the true self* (R. Ward, Trans.). New York: Basic Books. (Original work published 1979)
- Miller, D. T., & Moretti, M. M. (1988). The causal attributions of depressives: Self-serving or self-dismissing? In L. B. Alloy (Ed.), *Cognitive processes in depression* (pp. 266-286). New York: Guilford Press.

- Miller, D. T., & Ross M. (1975). Self-serving biases in the attribution of causality: Fact or fiction? *Psychological Bulletin*, *82*, 213-225.
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, *91*, 328-346.
- Nicholls, J. G. (1986). Varieties of interpretation of achievement motivation: A reply to Kukla and Scher. *Psychological Review*, *93*, 381-382.
- Pelham, B. W. (1991). On the benefits of misery: Self-serving biases in the depressive self-concept. *Journal of Personality and Social Psychology*, *61*, 670-681.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, *91*, 347-374.
- Pyszczynski, T., & Greenberg, J. (1987). Depression, self-focused attention, and self-regulatory preservation. In C. R. Snyder & C. E. Ford (Eds.), *Coping with negative life events: Clinical and social psychological perspectives* (pp. 105-129). New York: Plenum Press.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Ross, M., & Fletcher, G. D. O. (1985). Attribution and social perception. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., Vol. 2, pp. 73-122). New York: Random House.
- Shaver, P. R., & Brennan, K. A. (1991). Measures of depression and loneliness. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (Vol. 1, pp. 195-290). San Diego, CA: Academic Press.
- Shrauger, J. S., & Osberg, T. M. (1980). The relationship of time investment and task outcome to causal attributions and self-esteem. *Journal of Personality*, *48*, 360-377.
- Smith, T. W., & Rhodewalt, F. T. (1991). Methodological challenges at the social/clinical interface. In C. R. Snyder & D. R. Forsyth (Eds.), *The handbook of social and clinical psychology* (pp. 739-756). New York: Pergamon Press.
- Snyder, C. R., & Ford, C. E. (Eds.). (1987). *Coping with negative life events: Clinical and social psychological perspectives*. New York: Plenum Press.
- Spielberger, C. D., Gorsuch, R., & Lushene, R. (1970). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Strack, S., & Coyne, J. C. (1983). Social confirmation of dysphoria: Shared and private reactions to depression. *Journal of Personality and Social Psychology*, *44*, 798-806.
- Surber, C. F. (1984). Inferences of ability and effort: Evidence for two different processes. *Journal of Personality and Social Psychology*, *46*, 249-268.
- Sweeney, P. D., Shaeffer, D., & Golin, S. (1982). Attributions about self and others in depression. *Personality and Social Psychology Bulletin*, *8*, 37-42.
- Taylor, S. E., & Brown, J. D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, *103*, 193-210.
- Tennen, H., & Herzberger, S. (1987). Depression, self-esteem, and the absence of self-protective attributional biases. *Journal of Personality and Social Psychology*, *52*, 72-80.
- Tetlock, P. E., & Levi, A. (1982). Attribution bias: On the inconclusiveness of the cognition-motivation debate. *Journal of Experimental Social Psychology*, *18*, 68-88.
- Touhey, J. C., & Villemez, W. J. (1980). Ability attributions as a result of variable effort and achievement motivation. *Journal of Personality and Social Psychology*, *38*, 211-216.
- Vredenburg, K., Flett, G. L., & Krames, L. (1993). Analogue versus clinical depression: A critical reappraisal. *Psychological Bulletin*, *113*, 327-344.
- Weary, G., & Arkin, R. M. (1981). Attributional self-presentation. In J. H. Harvey, W. Ickes, & R. F. Kidd (Eds.), *New directions in attribution research* (Vol. 3, pp. 223-246). Hillsdale, NJ: Erlbaum.
- Weiner, B. (1980). A cognitive attribution-emotion-action model of motivated behavior: An analysis of judgments of help-giving. *Journal of Personality and Social Psychology*, *39*, 186-200.

Received December 20, 1991

Revision received August 25, 1993

Accepted August 30, 1993 ■