

# The Power of Being Positive: The Relation Between Positive Self-Concept and Job Performance

Timothy A. Judge

*Department of Management and Organizations  
University of Iowa*

Amir Erez

*Department of Management  
University of Florida*

Joyce E. Bono

*Department of Management and Organizations  
University of Iowa*

Most managers would probably agree that positivity is something they value in employees, yet selection research has virtually ignored the relation between employee positivity and job performance. This article suggests that a broad personality trait, labeled positive self-concept or core self-evaluations, is a potentially important personality trait in the prediction of job performance. Positive self-concept consists of four specific traits previously studied in isolation: self-esteem, generalized self-efficacy, locus of control, and (low) neuroticism or emotional stability. Data analyzed from 12 samples revealed that these specific traits are strongly correlated and comprise a common factor. Drawing from four motivation theories, we argue that the principal reason positive self-concept is linked to job performance is because positive employees are more motivated to perform their jobs. We also argue that, in some jobs, positive self-concept may be an ability factor. Finally, we discuss various implementation issues involved in using positive self-concept in selection decisions. Overall, this article suggests that positive self-concept is a trait deserving of more attention in selection research and practice.

Fit for the sunshine, so, it followed him  
 A happy tempered bringer of the best  
 Out of the worst.

Robert Browning

There is perhaps no virtue more desirable in Western society than being positive. Philosophers, theologians, counseling psychologists, sports psychologists, and authors of self-help books have placed heavy emphasis on the power of positive thinking as a means of achieving personal growth, satisfaction, and productivity. However, researchers have devoted little attention to the relation between positive self-concept and job performance, or the value employers place on positivity in selection decisions.<sup>1</sup> We believe this to be an oversight. In our experience, positivity is a trait valued by many employers. Furthermore, we believe that positive self-concept is a trait that can be measured reliably and accurately, and in many jobs is predictive of job performance. In this article we discuss the nature of positive self-concept and consider its possible relation to job performance. Before we discuss this relation, we define positive self-concept and describe the nature and meaning of the personality construct.

### THE NATURE AND MEANING OF POSITIVE SELF-CONCEPT

As described by Baumeister (1997), "The term self-concept refers to the totality of inferences that a person has made about himself or herself" (p. 681). Positive self-concept is the favorability of these self-inferences. Thus, individuals with a positive self-concept evaluate themselves positively, and are likely to make favorable inferences about themselves and be accepting of their identity. Children form the basic elements of their self-concept very early in life and, although changes in self-concept do occur, the initial formation of self-concept probably has lasting consequences for the individual.

Recently, Judge, Locke, and Durham (1997), drawing from several different literatures, introduced a similar concept, *core self-evaluations*. According to Judge et al., core self-evaluations are fundamental premises that individuals hold about themselves and their functioning in the world.<sup>2</sup> In contrast to some beliefs about self-concept, Judge et al. took a "top-down" focus in arguing that core evaluations are all-encompassing and that situationally specific appraisals depend on these core

<sup>1</sup>One exception is a study by Dunn, Mount, Barrick, and Ones (1995), who found that managers place significant weight on emotional stability (non-neuroticism) in their hiring decisions.

<sup>2</sup>Although positive self-concept could be argued to be broader than Judge, Locke, and Durham's (1997) conception of core self-evaluations, there is likely to be considerable overlap among these concepts. Furthermore, it is not clear whether there is any practical utility in distinguishing between the two concepts. Thus, for purposes of simplicity, we will use the terms interchangeably.

evaluations. Thus, because they are fundamental, core evaluations are implicated in all lesser or more specific evaluations and influence the nature of those evaluations. Implicit in Judge et al.'s argument is that a positive self-concept is not simply an accumulation of favorable self-regard in many spheres of life. Rather, favorable self-regard in these spheres is a result of a global positive self-concept. Because this perspective holds that positive self-regard in specific situations is purely epiphenominal, as a trait it only makes sense to consider self-concept at a global level.

According to Judge et al. (1997), core self-evaluation is a broad personality construct comprised of several more specific traits: self-esteem, generalized self-efficacy, locus of control, and non-neuroticism. Because there is a tradition of personality research investigating these individual traits, each will be described in turn.

### Self-Esteem

As noted by Greenwald, Bellezza, and Banaji (1988), self-esteem is the central element underlying a positive self-concept. At its core, self-esteem can be defined as the overall value that one places on oneself as a person (Harter, 1990). It refers to an individual's self-acceptance, self-liking, and self-respect. Research indicates that self-esteem demonstrates short-term fluctuations but long-term stability (Costa & McCrae, 1994). As noted by Baumgardner (1990), self-esteem is intimately related to self-knowledge. People with high levels of self-esteem appear to have consistent, stable, and lucid views of themselves whereas individuals with low self-esteem appear to have unclear, incomplete, or contradictory self-views. Locke, McClellan, and Knight (1996) argued that the only way to achieve self-knowledge is to think—to introspect, to be rational in judgment and independent in thought, and to act consistently on the basis of one's judgment. In fact, individuals with a poor self-concept often do not think properly. For example, research indicates that low self-esteem individuals overgeneralize the negative implications of failure (Brown & Dutton, 1995). As a result, the performance of low self-esteem individuals decreases after a failure experience while the same experience does not alter the performance of high self-esteem individuals. Thus conceptually, self-esteem should be strongly related to performance, especially following initial failure (Brockner, 1979). The overall relation between self-esteem and job performance has not been recently reviewed, although we are aware of many studies reporting a positive relation between the two constructs.

### Generalized Self-Efficacy

Self-efficacy is defined as one's judgments of "how well one can execute courses of action required to deal with prospective situations" (Bandura, 1982, p. 122). Although most research has considered self-efficacy as a situational variable, more recent research has distinguished between task-specific and generalized self-efficacy

(Chen & Gully, 1997; Gist, 1987; Gist & Mitchell, 1992). Generalized self-efficacy represents individuals' perception of their ability to perform across a variety of situations. Generalized self-efficacy is likely to be related to self-esteem because it encompasses individuals' judgments of their capabilities to handle events in their lives and deal successfully with life's challenges. On the other hand, self-efficacy is not the same as self-esteem because what an individual masters may not be fundamental to that which is valued by the individual. Only for important life domains should an individual's self-efficacy and self-esteem be significantly associated. A substantial body of research indicates that self-efficacy is related to task effort and performance, persistence, resilience in the face of failure, effective problem solving, and self-control (Bandura, 1986; Gist & Mitchell, 1992). Thus, high generalized self-efficacy (that is, a strong belief in one's own capabilities) can lead to a self-fulfilling prophecy—high generalized self-efficacy results in greater success in new endeavors and success, in turn, reinforces the initial assessment of self-efficacy. A recent meta-analysis suggests that general measures of self-efficacy show moderate ( $\rho = .26$ ) nonzero correlations with job performance (Hysong & Quiñones, 1997).

### Neuroticism

Neuroticism is one of the "Big Five" personality traits. Neuroticism represents the tendency to exhibit poor emotional adjustment and experience negative affects such as fear, hostility, and depression (Goldberg, 1990). Neurotic individuals are prone to anxiety, manifesting itself in tendencies to be fearful of novel situations and susceptibility to feelings of dependence and helplessness (Wiggins, 1996). Research also shows that neuroticism is associated with psychological distress in dealing with short- and long-term life changes (Ormel & Wohlfarth, 1991) and difficulty in decision-making tasks (Forgas, 1989). The literature linking neuroticism to job performance is not particularly clear. Barrick and Mount (1991) found no relation between neuroticism and job performance whereas Tett, Jackson, and Rothstein (1991), confining their analysis to "confirmatory" studies (studies where authors hypothesized a relation between the trait and job performance), found that neuroticism displayed a nonzero correlation with job performance ( $\rho = -.22$ ). Explanations for the differences in these studies can be found in two more recent articles (Ones, Mount, Barrick, & Hunter, 1994; Tett, Jackson, Rothstein, & Reddon, 1994). In a meta-analysis of all available studies of personality and job performance in the European community, Salgado (1997) found a nonzero ( $\rho = .19$ ) correlation between emotional adjustment and job performance.

### Locus of Control

Locus of control represents the perceived degree of control in life. Individuals with an internal locus of control believe their behavior controls their lives, whereas

individuals with an external locus of control believe that their life is controlled by luck, chance, fate, or powerful others (Rotter, 1966). Although locus of control is conceptually related to generalized self-efficacy, the two concepts differ in one important respect. Self-efficacy pertains to confidence with respect to behaviors, whereas locus of control is more concerned with confidence in being able to control outcomes. In expectancy theory terms, efficacy pertains more to expectancy and locus more to instrumentality. As Spector (1982) noted in his review of the literature, the few studies that have been published suggest a positive relation between internal locus of control and job performance (although Tett et al., 1991, based on a small number of correlations [ $k = 7$ ], did find the correlation between locus of control and job performance to be relatively weak [ $\rho = .13$ ]).

### EMPIRICAL RELATION AMONG THE SPECIFIC CORE SELF-EVALUATION TRAITS

Although there are clear conceptual relations among the specific traits that are assumed to comprise the core self-evaluations construct, empirical findings that attempt to investigate the question of how strongly these individual traits are correlated is lacking. Thus, to test this structure, we conducted a meta-analysis of the correlations among these traits for 12 samples of roughly 15,000 individuals (the occupational representation of these samples ranged from university employees to managers to physicians). To test the structure of these traits, we first combined the samples using meta-analysis (Hunter & Schmidt, 1990). The correlations among the traits, both corrected and uncorrected for statistical artifacts, are presented in Table 1. As the table shows, the estimated true correlations among the traits are substantial. Accordingly, we submitted the corrected correlations to a principal components analysis. Results of this analysis are provided in Table 2. As the table shows, the traits load strongly on an underlying factor that can be interpreted to represent core self-evaluations. These results suggest that, rather than being studied in isolation, or included in a study as competing explanations of behavior, the specific traits should be considered manifestations of one underlying construct.<sup>3</sup>

---

<sup>3</sup>Optimism is closely related to core self-evaluations. Research has shown that dispositional optimists dwell less on negative affect and report higher quality of life than do pessimists (Scheier et al., 1989) and may perform better in certain situations (Lee, Ashford, & Jamieson, 1993). However, because of the serious concerns that have been raised over the conceptualization and measurement of dispositional optimism (Lee et al., 1993; Smith, Pope, Rhodewalt, & Poulton, 1989), optimism is not included in our conceptualization of core self-evaluations. Similarly, positive affectivity (PA) and negative affectivity (NA) could be included. However, it is somewhat unclear whether they measure traits or life satisfaction (Judge, Locke, Durham, & Kluger, 1998). In addition, NA and Neuroticism are highly correlated (Larsen & Ketelaar, 1991). Thus, we do not see much profit in including these concepts in our conceptualization of core self-evaluations.

**TABLE 1**  
**Correlations Among Core Self-Evaluation Traits**

<i>Trait</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
Self-esteem	1.00	.70	.44	-.51
Generalized self-efficacy	.86	1.00	.45	-.45
Locus of control	.58	.59	1.00	-.36
Neuroticism	-.62	-.54	-.47	1.00

*Note.* Correlations below the diagonal are corrected for measurement and sampling error. Correlations above the diagonal are uncorrected. For the locus of control–self-esteem, locus of control–neuroticism, and self-esteem–neuroticism correlations, number of correlations = 12 and combined  $N = 15,888$ ; for the correlations involving generalized self-efficacy, number of correlations = 11 and combined  $N = 14,777$ . A 95% confidence interval for each correlation excludes zero.

**TABLE 2**  
**Principal Components Analysis of the Core Self-Evaluation Traits**

<i>Dispositional Concept</i>	<i>Factor 1: "Core Self-Evaluations"</i>
Self-esteem	.92
Generalized self-efficacy	.90
Locus of control	.77
Neuroticism	-.77
Eigenvalue	2.85
Percentage variance explained	71.20

*Note.* Results are based on meta-analyzed correlations.

## WHY IS POSITIVE SELF-CONCEPT RELATED TO JOB PERFORMANCE?

Thus far we have presented an overview of the positive self-concept construct, discussed its composition, and mentioned some research on the relation between the specific traits comprising positive self-concept and job performance. We now turn to a discussion of the possible mechanisms by which positive self-concept is linked to job performance. Following the dictum that performance is a function of motivation and ability, we organize this section by discussing the effect of positive self-concept on motivation to perform, and of positive self-concept on ability to perform.

### Positive Self-Concept As a Source of Work Motivation

Work motivation, as a process, includes a series of assessments such as whether or not to engage in a behavior, how much effort to exert, and how to regulate behavior once a person decides to engage in the chosen task. However, those assessments

themselves may be influenced by bottom-line evaluations about oneself such as "Am I capable?" or "Can I accomplish this task?" Thus, core self-evaluations may be crucial to the formation of more specific assessments that are directly related to decisions regarding motivation to perform. According to Lazarus (1991), there are two processes for appraising information regarding events. In the primary appraisal, an individual decides whether an event is positive or negative. In the secondary appraisal, an individual determines who or what is responsible for the event, whether or not the event is manageable, both practically and emotionally, and future expectations from the event. In turn, the results of the appraisal process influence the course of action individuals engage in. Core self-evaluations may be linked to each of these components of the appraisal process and therefore, to the course of action. For example, when faced with a difficult situation at work, individuals with a poor self-concept (i.e., highly neurotic externals with low self-esteem and self-efficacy) may view the problem negatively, determine that the problem is beyond their control and therefore not manageable, and conclude that their efforts could not solve the problem. Low motivation would result. As such, core self-evaluations should influence individuals' motivational decision-making processes. The purpose of the following discussion is to explain how these dispositions influence motivation and performance through their effects on evaluation of events. Four theoretical frameworks provide the links between the dispositions in the core self-evaluations group and work motivation and performance.

*Self-consistency theory.* Self-consistency theory (Korman, 1970) hypothesizes that when all else is equal, people will enact and be satisfied with those behavioral roles that maximize their sense of cognitive balance or consistency. Accordingly, individuals should be motivated to behave in a manner consistent with their self-image, and therefore they will approach jobs or tasks in a way that allows them to preserve their self-image. In other words, if one's self-concept requires effective performance on a job, this individual will be motivated to exert effective performance so as to achieve "consistent cognitions." Moreover, this theory hypothesizes that individuals typically choose and are most satisfied with those tasks consistent with their self-image. Thus, if individuals view themselves as competent, they will choose those situations in which they can be competent and avoid situations where they cannot perform well.

In line with self-consistency theory, Korman (1970) hypothesized that individuals with high self-esteem should be more motivated to be good performers than those with low self-esteem because successful performance allows them to maintain this self-image. In fact, some research supports Korman's hypothesis. Several experiments have demonstrated that when individuals' perceptions of their abilities are manipulated, those self-perceptions of ability are correlated with later performance (Feather & Saville, 1967; Friedman & Goodman, 1967; Kaufman, 1962). Studies also have shown that individuals choose occupations that are congruent

with their self-image (Korman, 1967a, 1967b). Additionally, research has found that individuals who perform at a level higher than their self-image reduce their performance to coincide with that self-image (Aronson & Carlsmith, 1962). In sum, Korman's hypothesis that high self-esteem individuals will outperform low self-esteem people has some initial support, although some inconsistent findings should be noted (Brockner, 1983; Tharenou, 1979).

*The happy productive worker.* The happy productive worker hypothesis originated in the "human relations" movement in organizational psychology and has been with us for decades. The premise of this hypothesis is that all things equal, happier, more satisfied employees will outperform employees who are dissatisfied with their jobs and experience negative moods. Despite research suggesting a weak relation between job satisfaction and job performance (Iaffaldano & Muchinsky, 1985), we have collected data for an updated meta-analysis that shows a stronger relation between job satisfaction and performance than has been found in the past. These findings may cast new light on the validity of the happy productive worker hypothesis.

Recently, several researchers have suggested that the happy-productive worker hypothesis might best be recast in terms of the relation between emotions and emotional tendencies and performance (George & Brief, 1996; Staw, Sutton, & Pelled, 1994; Weiss & Cropanzano, 1996). For example, Staw et al. demonstrated that positive emotions on the job led to favorable outcomes on the job. Similarly, numerous studies have demonstrated a link between emotions and quality of decision making and job performance (e.g., Isen, 1993; Rafaeli & Sutton, 1989; Sutton & Rafaeli, 1988). Because mood and emotions influence performance, the antecedents of emotions should indirectly influence performance. One of the major antecedents of emotions is neuroticism. The negative emotions brought about by neuroticism (e.g., depression, anxiety, guilt, anger) may act in two major ways to influence motivation and performance. First, negative emotional tendencies may detract from performance by blocking positive moods (see Brief, Butcher, & Roberson, 1995). Second, those who are high in neuroticism exhibit behaviors (such as nervousness, ill-temperedness, and self-pity) that may block more favorable social interactions that have the potential to support performance. In turn, these negative emotions and the corresponding unfavorable outcomes should lead to lower motivation and performance.

*Learned helplessness.* Learned helplessness theory argues that individuals who repeatedly encounter failure gradually become convinced that they lack control over situations. This "lack of control" perception leads individuals to lower their effort and withdraw from task-oriented behaviors (Brockner et al., 1983). According to the model of learned helplessness, when faced with bad events, people first



try to interpret these occurrences. These interpretations of bad events in turn influence how individuals react to them. Abramson, Seligman, and Teasdale (1978) suggested that one major factor influencing how individuals interpret bad events is whether or not they interpret the cause of the event as something that is unstable (can be changed) or stable (immutable). For example, a bad event could be interpreted as "it's going to last forever" (stable) or alternatively as "this will be over soon" (unstable). Interpreting bad events as stable constitutes a *pessimistic explanatory style* whereas interpreting bad events as transient supports forming an *optimistic explanatory style*. Research has found that people who interpret behaviors pessimistically are more likely to display helplessness deficits (i.e., lower their effort, withdraw from task oriented behaviors) when faced with a bad event than individuals who exhibit optimistic interpretations of behaviors (Abramson et al., 1978; Peterson & Seligman, 1984; Seligman, Abramson, Semmel, & von Baeyer, 1979). Clearly then, the learned helplessness model has implications for motivation and performance.

In fact, one notable study by Seligman and Schulman (1986) found a strong relation between "event evaluation styles" and performance. Seligman and Schulman looked at the performance of optimistic insurance agents in comparison to pessimistic agents. Seligman and Schulman found that individuals with optimistic coping styles not only remained in their jobs twice as long as pessimistic agents, but they also sold more insurance than the pessimistic individuals.

Two dispositions in the core self-evaluations group—locus of control and self-efficacy—may strongly influence these "optimistic" versus "pessimistic" evaluation styles. The notion of internals versus externals implies that an individual's locus of control partly determines his or her perception of control regardless of the situational implications. Thus, locus of control may influence one's perceptions of the stability of the events. In other words, those who believe that they can influence circumstances may be more likely to believe that their level of effort will generate change than those who believe they have little or no control over circumstances in their lives. Accordingly, internals should perceive bad events as less stable than externals and thus, possess a more optimistic evaluation style. Generalized self-efficacy may act in the same manner to influence perceptions of the stability of events. Individuals with high generalized self-efficacy should believe in their ability to change situations in general, and bad events in particular, whereas those low on generalized self-efficacy should believe they have no effect over bad events. Accordingly, high self-efficacy individuals should have a more "optimistic" evaluation style than those with low self-efficacy. These explanatory styles, in turn, are clearly linked to motivation and performance.

**Control theory.** Numerous motivation theories, based on cybernetic control principles, have been proposed (Carver & Scheier, 1981; Hyland, 1988; Klien, 1989; Lord & Hanges, 1987). However, the primary model that underlines many

of these theories is Carver and Scheier's (1981) control theory. Carver and Scheier suggested that individuals self-regulate their behaviors via a negative (discrepancy-reducing) feedback loop. In this process, comparisons between individuals' standards and perceived performances result in cognitive and behavioral outputs. These outputs attempt to reduce any perceived discrepancies between an established standard and actual performance. Two conditions must exist in order for the self-regulation process to work. First, individuals must focus on their performance in order to obtain input for comparison and second, the self-regulation process is only activated whenever a divergence occurs between some standard and actual performance.

When discrepancies occur, they produce one of three possible responses. First, individuals can maintain their standard level and thus exert additional effort to obtain the performance goal. Second, individuals can reduce the standard to better achieve the goal. Third, individuals can withdraw from the task and the self-regulation process entirely. (Unfortunately, similar to Adams's, 1965, equity theory, control theory offers no explanation for how individuals choose among options, although we would note that the previous three theories may explicate some of the mediating mechanisms.) Research has shown that when individuals are faced with discrepancies between acceptable standards of performance versus actual performance, those high in self-esteem and self-efficacy, as well as high on internal locus of control, tend to choose the first option posed in control theory (Bandura & Cervone, 1983; Brockner, 1988; Weiss & Sherman, 1973). In other words, when negative feedback is given, individuals who have a positive self-concept tend to increase their efforts to match their actual performance to the standards. Conversely, people who have a negative self-concept tend to either lower their standards or completely withdraw from the task when given negative feedback (Bandura & Cervone, 1983; Brockner, 1988; Weiss & Sherman, 1973). Because individuals high on self-esteem, self-efficacy, and internal locus of control tend to increase their effort, they should be better performers than those individuals with low self-esteem, self-efficacy, or externals who tend to lower their standards or withdraw from the task. Thus, control theory may explain the link between these three dispositions and performance. To our knowledge there has been no research on neuroticism in regard to this issue. However, we expect that the results will be similar to the effect of the other dispositions in the core self-evaluations group.

Although similarities among these three dispositions have been ignored, for the most part, some research has attempted to integrate them. For example, Hollenbeck and Brief (1987) hypothesized that self-esteem and locus of control as well as "self-perceived ability" would predict performance. They found a significant relation between a common factor representing these dispositions and self-set goal difficulty and performance. In a later study, Hollenbeck, Brief, Whitener, and Pauli (1988) used concepts from control theory to justify the links between self-esteem, locus of control, and performance. Interestingly, in this study, Hollenbeck et al.

measured each disposition's influence on performance separately. Presenting the results of two studies, Hollenbeck et al. found a relation between self-esteem and performance in one of the studies while the second study showed no significant main effects. The findings of these two investigations (e.g., Hollenbeck & Brief, 1987; Hollenbeck et al., 1988) suggest that measuring the dispositions as a group may improve the predictive power of dispositions on performance.

### Positive Self-Concept As an Ability Factor

We expect that most of the reason positive self-concept predicts job performance is through its link to motivation to perform. Thus, we believe positive self-concept is largely a motivational trait. However, we also believe that positive self-concept may represent an ability factor, at least in some jobs, for several reasons.

First, two recent studies indicate that managers with a positive self-concept have the ability to cope more effectively with changes induced by organizational transformations (Judge, Thoresen, & Pucik, 1996; Wanberg & Banas, 1997). Because organizations are changing at an unprecedented rate, traits that enable managers to cope more effectively with change should allow them to perform better. In fact, this is exactly what Judge et al. found—coping with change mediated the relation between positive self-concept and job performance.

Second, research shows that high self-efficacy individuals perform better in the presence of social facilitation (performing in the presence of others) whereas low self-efficacy individuals perform worse in these conditions (Sanna, 1992). Given the increasing use of teams in organizations, more work is being done in the presence of, and in cooperation with, others. Thus, it seems possible that employees with a positive self-concept will be more effective in team contexts. In fact, in their article in this issue, Mount, Barrick, and Stewart show that emotional stability displays a true correlation of .27 with job performance in team settings.

Third, if one can argue that individuals with a positive self-concept are more likely to be positive toward others, positive self-concept could be argued to be a success factor in jobs where positive attitudes toward others are valued. Given the increased emphasis organizations have placed on customer service, it would appear that individuals with a positive self-concept are better able to perform these jobs. Supporting this proposition is research by Hogan, Hogan, and Busch (1984), who found that emotional stability was a component of customer service orientation.

Fourth, measures of emotional stability display true score correlations of .50 with integrity test scores (Ones, 1993), and emotional stability is a component of employee reliability (Hogan & Hogan, 1989). This suggests that individuals with a positive self-concept are likely to be honest, reliable employees.

Fifth, socioanalytic personality theory (Hogan, 1996) argues that people strive for acceptance and status in society (i.e., to get along and get ahead). According to

socioanalytic theory, these outcomes are achieved through one's reputation—if one hopes to get along with others, one must foster a reputation for being an agreeable, cooperative person. In other words, people achieve more or less acceptance or status in society through their reputations. Clearly, preserving or enhancing one's reputation is a motivated act—people who do not care about their reputation are unlikely to be accepted or successful. However, some people also are better at managing their reputations than are others. This is where we believe positive self-concept comes into play. It was shown earlier that individuals with a poor self-concept have inaccurate, incomplete self-knowledge. Failing to know oneself would lead to a loss of control over one's reputation (i.e., we cannot systematically control something we do not understand). Thus, individuals with a negative self-concept should be less successful at achieving acceptance and status because they are less able to control and manage their reputation. Furthermore, from another's point of view, individuals who are depressed, agitated, worried, and anxious are unlikely to be seen as rewarding people with whom to interact. By this reasoning, individuals who have a negative self-concept are avoided, and therefore less likely to be accepted or successful.

Finally, poor self-concept has been linked to various forms of escapist behavior, including alcohol abuse, binge eating, suicide attempts and, more generally, acts that avoid shifting attention inward (Baumeister, 1997). This general tendency, as well as the specific behaviors that accompany it, would appear to be substantial hindrances to effective performance. In sum, evidence suggests that positive self-concept, at least for certain types of jobs, represents an ability factor that leads to higher levels of job performance. Although some of these factors may represent motivational differences as much as ability differences between individuals with high and low self-concepts, all suggest a significant relation between positive self-concept and job performance.

### Use of Positive Self-Concept in Selection Decisions

This article was intended to provide a review of a new personality construct, and discuss its likely relation to job performance. If this construct is related to performance as we believe, there is much work to be done. In this section we consider the practical issues involved in using positive self-concept in selection decisions. As with any selection measure, several fundamental concerns are legal and measurement issues, the role of faking, and applicant reactions.

*Legal issues.* Legal issues surrounding the use of personality measures in selection are reviewed elsewhere (see Mount & Barrick, 1995a) and will not be repeated here. Suffice it to say that legal concerns with measures of self-concept

are likely subject to the same rules as measures of other personality traits. More germane to this article, however, is the issue of adverse impact—if measures of self-concept were used in selection decisions, would such measures have adverse impact against women or minorities?

Women score higher on measures of neuroticism than do men, although the magnitude of the difference varies from sample to sample. For one of the most common measures of Neuroticism (NEO Personality Inventory), Costa and McCrae (1992) reported that women score anywhere from 9.5% to 14.3% higher than men, depending on the sample and the measure (roughly .40 *SD* units [*d*] regardless of the measure or sample). This would suggest moderate adverse impact against female applicants if measures of neuroticism were used in selection decisions. (However, Costa and McCrae, 1992, commented that these differences are “quite modest in magnitude” and concluded, “For many purposes it would appear to be appropriate to use combined sex norms, although separate sex norms are still offered” [p. 55].) There has been less attention to adverse impact against minorities, but the available evidence suggests that neuroticism does not adversely affect Blacks or Hispanics—if anything, these minority groups score lower on neuroticism than Whites (Mount & Barrick, 1995a).

Unfortunately, there is considerably less evidence regarding racial and gender differences in self-esteem and the other core self-evaluations traits. Lefcourt’s (1991) review suggested that women score slightly lower (on average, 6% or  $d = 0.19$ ) on measures of internal locus of control. Although women scored lower than men on the positive self-concept measures in some of the data we have collected, the differences were very slight with respect to self-esteem (average  $d = 0.11$ , 1.5% lower), generalized self-efficacy (average  $d = 0.06$ , 0.8% lower), and locus of control (average  $d = 0.17$ , 2.4% lower). Using these same data, the differences between Whites and minorities were also very small, with a slight advantage toward minorities. Finally, age tended to be weakly, positively related to self-esteem, generalized self-efficacy, and internal locus of control, while it was significantly, negatively correlated with neuroticism. In sum, the evidence would suggest that measures of positive self-concept might have slight to moderate adverse impact against women, with no adverse impact against minorities or older employees.

**Measurement issues.** Most measures of the Big Five personality traits are proprietary. However, measures of the positive self-concept traits, for the most part, are in the public domain. Well-established measures of self-esteem (Rosenberg, 1979), generalized self-efficacy (Sherer et al., 1982), and locus of control (Lefcourt, 1991) exist in the public domain. Extensively validated measures of neuroticism or emotional adjustment also exist; some of the measures are proprietary (e.g., Costa & McCrae, 1992; Hogan & Hogan, 1992; Mount & Barrick, 1995b), whereas others are in the public domain (Goldberg, 1997). Given the validity of personality tests

in employment decisions, even use of proprietary measures would appear to have substantial cost-saving implications for organizations.

One practical measurement issue is whether it is sufficient to simply measure one facet of positive self-concept to the exclusion of the other facets. For example, given the high correlation between self-esteem and the positive self-concept factor (see Table 2), one might simply use Rosenberg's (1979) 10-item self-esteem scale. We do not believe such an approach is wise. As far as we know, no broad measure of positive self-concept exists. Until such a measure is developed, measuring one facet to the exclusion of the others is somewhat like purporting to measure overall job satisfaction using only a measure of satisfaction with one facet of the job. For example, work satisfaction correlates highly with overall job satisfaction, but no one would argue that the two are perfectly equivalent constructs. Furthermore, personality researchers are debating the relative merits of studying broad and general versus more specific personality traits, with some researchers arguing in favor of the general factor (e.g., Mount & Barrick, 1995a) and others favoring a more fine-grained description of personality (Hough, in press). This debate would appear to be as applicable to measures of positive self-concept as to the Big Five personality traits. Thus, if only one facet of personality is included, the ability to investigate these levels of analysis issues is lost. For these reasons, until a broad measure of positive self-concept is developed, we urge researchers to include multiple facets in their studies.

*Faking.* A continuing debate in the literature on personality assessment is whether faking undermines the validity of personality tests. Because few individuals would want to describe themselves as having poor work habits (low conscientiousness) or low self-regard (negative self-concept), and because answers to these questions are nearly impossible to verify, some have argued that the possibility of "faking good" is quite real. In fact, research suggests that applicants can enhance or even fake their responses if they are motivated to do so (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990). Although applicants may try to look good by enhancing their responses to personality tests, it seems clear that such enhancement does not significantly detract from the validity of the tests (Barrick & Mount, 1996; Hough et al., 1990; Ones, Viswesvaran, & Reiss, 1996). Because it has yet to be shown that faking undermines the validity of personality tests in selection, it also is yet to be shown that faking will detract from the usefulness of measures of positive self-concept in selection decisions.

*Applicant reactions.* An emerging body of evidence suggests that applicants' perceptions of personality tests are negative. One study reported that 46% of applicants had no idea how a personality test could be interpreted by organiza-

tions, and 31% could not imagine how qualifications could be assessed with a personality inventory (Schuler, 1993). Similarly, another study found that newly hired managers perceived personality tests as the 13th least-valid predictor of job performance of 14 selection tools (Smither, Reilly, Millsap, Pearlman, & Stoffey, 1993). Other studies suggest that applicants believe personality tests are invasive and unnecessary for companies to make accurate selection decisions (Rosse, Miller, & Stecher, 1994; Rynes & Connerley, 1993). It remains to be seen whether these concerns meaningfully affect applicant behavior. More research is needed into the implications of the way applicants view personality tests, and whether these same concerns would apply to measures of positive self-concept.

### Future Research

Overall, we believe there is much promise in using positive self-concept in selection decisions. However, there are also some pressing research needs. First, although this article has provided a review of the literature and offered conceptual support for the relation between positive self-concept and job performance, a quantitative review of the literature is needed. A review revealing a true correlation between positive self-concept and job performance similar in magnitude to the true correlation between conscientiousness and job performance ( $r = .22$  in Barrick and Mount's, 1991, original meta-analysis;  $r = .31$  in their updated meta-analysis, Mount & Barrick, 1995a), would suggest that, in addition to conscientiousness, positive self-concept should be considered in selection decisions.

Second, some studies have related measures of the components of positive self-concept to job performance. However, there are very few studies that have included more than one of the specific traits in one study, and we are not aware of any studies that have used multiple measures in a selection context. Thus, before measures of positive self-concept are actually used in selection decisions, concurrent and predictive validation studies using the measures in actual selection settings where utility and adverse impact issues can be evaluated are needed.

A third issue deserving of future research attention is the accuracy of one's self-concept. Is it always desirable to be positive, even if such positivity is unfounded (i.e., illusory or inaccurate)? We believe positive self-concept to be a highly desirable trait in performing most jobs. However, is the accuracy of a positive self-view relevant? For example, assume that Jack and Jill both have a favorable self-concept, but Jill's self-concept is accurate (Jill's peers indicate that she is a positive, well-adjusted person) whereas Jack's positive self-concept is illusory (peers indicate that Jack does not really have a positive self-concept). Would Jack and Jill have the same predicted level of job performance? According to some researchers, the answer to this question would be "yes." Taylor (1989), for example, argued, "Normal human thought is marked not by accuracy but by positive

self-enhancing illusions" (p. 7), and further argued that positive illusions or self-deception (possessing an unrealistically positive self-image) are conducive to psychological adjustment and may produce effective performance in many situations. Bandura (1989) seems to agree in commenting,

When people err in their self-appraisals, they tend to overestimate their capabilities. This is a benefit rather than a cognitive failing to be eradicated. If self-efficacy beliefs always reflected only what people could do routinely, they would rarely fail but they would not mount the extra effort needed to surpass their ordinary performances. (p. 1177)

On the other hand, Colvin and Block (1994), in their review of the literature, concluded that illusory positive self-concept is ultimately detrimental. Another study (John & Robins, 1994) showed that high versus low narcissism was unrelated to actual performance but strongly related to perceived performance. Robins and John (1997) showed that only individuals classified as relatively accurate in their self-evaluations were described by trained psychologist observers as optimally adjusted. Furthermore, individuals independently classified as self-enhancers were evaluated as significantly less well-adjusted by the observers than those classified as self-diminishers. When this position is considered in light of our arguments, a potential paradox emerges: There is value (to the individual and to the employer) in having a positive self-concept, but is it only when the self-concept is truly positive? Given the problems an affirmative answer to this question would imply for self-reports of self-concept, this is a question future research should consider.

Fourth, research is needed in the area of the malleability of positive self-concept. Although neuroticism, self-esteem, and locus of control show considerable temporal stability and, in fact, appear to have a genetic basis (Plomin, Chipuer, & Loehlin, 1990; Roy, Neale, & Kendler, 1995), stability and even genetic predispositions do not directly address the question of whether dispositions can be changed (Gerhart, 1990). If positive self-concept can be changed, there also may be developmental implications regarding how induced changes in self-concept may influence behavior and attitudes in the workplace (Judge et al., 1996). Thus, more research into the origins and malleability of self-concept is needed.

Finally, research is also needed on the incremental validity of positive self-concept over more established individual difference measures in selection. The limited research that is available suggests that general cognitive ability is uncorrelated with locus of control (Phillips & Gully, 1997) and self-efficacy (Martocchio & Judge, 1997). Another recent study suggested that conscientiousness was correlated only .24 with positive self-concept (Erez, 1997). Thus, it would appear that the potential validity of positive self-concept in predicting job performance would not be undermined by the inclusion of conscientiousness and general cognitive ability. However, only future research can answer this question directly.



## REFERENCES

- Abramson, L., Seligman, M. E. P., & Teasdale, J. (1978). Learned helplessness in humans: Critique and reformulation. *Journal of Abnormal Psychology, 87*, 49–74.
- Adams, J. S. (1965). Inequity in social exchange. *Advances in Social Psychology, 2*, 267–299.
- Aronson, E., & Carlsmith, J. M. (1962). Performance expectancy as a determinant of actual performance. *Journal of Abnormal and Social Psychology, 65*, 178–182.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*, 122–147.
- Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice Hall.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*, 1175–1184.
- Bandura, A., & Cervone, D. (1983). Self-evaluative and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology, 45*, 1017–1028.
- Barrick, M. R., & Mount, M. K. (1991). The Big Five personality dimensions and job performance: A meta-analysis. *Personnel Psychology, 44*, 1–26.
- Barrick, M. R., & Mount, M. K. (1996). Effects of impression management and self-deception on the predictive validity of personality constructs. *Journal of Applied Psychology, 81*, 261–272.
- Baumeister, R. F. (1997). Identity, self-concept, and self-esteem: The self lost and found. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 681–710). San Diego, CA: Academic.
- Baumgardner, A. H. (1990). To know oneself is to like oneself: Self-certainty and self-affect. *Journal of Personality and Social Psychology, 58*, 1062–1072.
- Brief, A. P., Butcher, A. H., & Roberson, L. (1995). Cookies, disposition, and job attitudes: The effects of positive mood-inducing events and negative affectivity on job satisfaction in a field experiment. *Organizational Behavior and Human Decision Processes, 62*, 55–62.
- Brockner, J. (1979). The effects of self-esteem, success–failure, and self-consciousness on task performance. *Journal of Personality and Social Psychology, 37*, 1732–1741.
- Brockner, J. (1983). Low self-esteem and behavioral plasticity: Some implications. In L. Wheeler & P. R. Shaver (Eds.), *Review of personality and social psychology* (Vol. 4, pp. 237–271). Beverly Hills: Sage.
- Brockner, J. (1988). *Self-esteem at work*. Lexington, MA: Lexington.
- Brockner, J., Gardner, A. M., Bierman, J., Mahan, T., Thomas, B., Weiss, W., Winters, L., & Mitchell, A. (1983). The roles of self-esteem and self-consciousness in the Wortman–Brehm model of reactance and learned helplessness. *Journal of Personality and Social Psychology, 45*, 199–209.
- Brown, J. D., & Dutton, K. A. (1995). The thrill of victory, the complexity of defeat: Self-esteem and people's emotional reactions to success and failure. *Journal of Personality and Social Psychology, 68*, 712–722.
- Carver, C. S., & Scheier, M. F. (1981). *Attention and self-regulation: A control theory approach to human behavior*. New York: Springer-Verlag.
- Chen, G., & Gully, S. M. (1997, August). *Specific self-efficacy, general self-efficacy, and self-esteem: Are they distinguishable constructs?* Paper presented at the annual meeting of the Academy of Management, Boston.
- Colvin, C. R., & Block, J. (1994). Do positive illusions foster mental health? An examination of the Taylor and Brown formulation. *Psychological Bulletin, 116*, 3–20.
- Costa, P. T., Jr., & McCrae, R. R. (1992). *Professional manual for the NEO PI-R and NEO-FFI*. Odessa, FL: Psychological Assessment Resources.
- Costa, P. T., Jr., & McCrae, R. R. (1994). Set like plaster? Evidence for the stability of adult personality. In T. F. Heatherton & J. L. Weinberger (Eds.), *Can personality change?* (pp. 21–40). Washington, DC: American Psychological Association.

- Dunn, W. S., Mount, M. K., Barrick, M. R., & Ones, D. S. (1995). Relative importance of personality and general mental ability in managers' judgments of applicant qualifications. *Journal of Applied Psychology, 80*, 500-509.
- Erez, A. (1997). *Core self-evaluations as a source of work-related motivation and performance*. Unpublished doctoral dissertation, Cornell University, Ithaca, NY.
- Feather, N., & Saville, M. (1967). Effects of amount of prior success and failure on expectations of success and subsequent task performance. *Journal of Personality and Social Psychology, 5*, 226-232.
- Forgas, J. P. (1989). Mood effects on decision making strategies. *Australian Journal of Psychology, 41*, 197-214.
- Friedman, A., & Goodman, P. (1967). Wage inequity, self-qualifications, and productivity. *Organizational Behavior and Human Performance, 2*, 406-417.
- George, J. M., & Brief, A. P. (1996). Motivational agendas in the workplace: The effects of feelings on focus of attention and work motivation. *Research in Organizational Behavior, 18*, 75-109.
- Gerhart, B. (1990, August). *The doubtful practical relevance of dispositional effects on job satisfaction*. Paper presented at the annual meeting of the Academy of Management, San Francisco.
- Gist, M. E. (1987). Self-efficacy: Implications for organizational behavior and human resource management. *Academy of Management Review, 12*, 472-485.
- Gist, M. E., & Mitchell, T. R. (1992). Self-efficacy: A theoretical analysis of its determinants and malleability. *Academy of Management Review, 17*, 183-211.
- Goldberg, L. R. (1990). An alternative "Description of Personality": The Big-Five factor structure. *Journal of Personality and Social Psychology, 59*, 1216-1229.
- Goldberg, L. R. (1997). A broad-bandwidth, public-domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Deary, F. De Fruyt, & F. Ostendorf (Eds.), *Personality psychology in Europe* (Vol. 7). The Netherlands: Tilburg University Press.
- Greenwald, A. G., Bellezza, F. S., & Banaji, M. R. (1988). Is self-esteem a central ingredient of the self-concept? *Personality and Social Psychology Bulletin, 14*, 34-45.
- Harter, S. (1990). Causes, correlates, and the functional role of global self-worth: A life-span perspective. In R. J. Sternberg & J. Kolligan, Jr. (Eds.), *Competence considered* (pp. 67-97). New Haven, CT: Yale University Press.
- Hogan, R. (1996). A socioanalytic perspective on the five-factor model. In J. S. Wiggins (Ed.), *The five-factor model of personality: Theoretical perspectives* (pp. 163-179). New York: Guilford.
- Hogan, R., & Hogan, J. (1989). How to measure employee reliability. *Journal of Applied Psychology, 74*, 273-279.
- Hogan, R., & Hogan, J. (1992). *Hogan Personality Inventory manual*. Tulsa, OK: Hogan Assessment Systems.
- Hogan, R., Hogan, J., & Busch, C. (1984). How to measure service orientation. *Journal of Applied Psychology, 69*, 157-163.
- Hollenbeck, J. R., & Brief, A. P. (1987). The effects of individual differences and goal origin on goal setting and performance. *Organizational Behavior and Human Decision Processes, 40*, 392-414.
- Hollenbeck, J. R., Brief, A. P., Whitener, E. M., & Pauli, K. E. (1988). An empirical note on the interaction of personality in personnel selection. *Journal of Management, 14*, 441-451.
- Hough, L. M. (in press). The millennium for personality psychology: New horizons or good old daze? *Applied Psychology: An International Review*.
- Hough, L. M., Eaton, N. E., Dunnette, M. D., Kamp, J. D., & McCloy, R. A. (1990). Criterion-related validities of personality constructs and the effect of response distortion of those validities [Monograph]. *Journal of Applied Psychology, 75*, 581-595.
- Hunter, J. E., & Schmidt, F. L. (1990). *Methods of meta-analysis*. Newbury Park, CA: Sage.

- Hyland, M. E. (1988). Motivational control theory: An integrative framework. *Journal of Personality and Social Psychology*, 55, 642–651.
- Hysong, S. J., & Quiñones, M. A. (1997, April). *The relationship between self-efficacy and performance: A meta-analysis*. Paper presented at the annual meeting of the Society for Industrial and Organizational Psychology, St. Louis, MO.
- Iaffaldano, M. T., & Muchinsky, P. M. (1985). Job satisfaction and performance: A meta-analysis. *Psychological Bulletin*, 97, 251–273.
- Isen, A. M. (1993). Positive affect and decision making. In M. Lewis & J. Haviland (Eds.), *Handbook of emotion* (pp. 261–277). New York: Guilford.
- John, O. P., & Robins, R. W. (1994). Accuracy and bias in self-perceptions: Individual differences in self-enhancement and the role of narcissism. *Journal of Personality and Social Psychology*, 66, 206–219.
- Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior*, 19, 151–188.
- Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, 83, 17–34.
- Judge, T. A., Thoresen, C. J., & Pucik, V. (1996, August). *Managerial coping with organizational change: A dispositional perspective*. Paper presented at the annual meeting of the Academy of Management, Cincinnati, OH.
- Kaufman, H. (1962). Task performance and responses to failure as functions of imbalance in the self-concept. *Psychological Monographs*, 77(6, Whole No. 569).
- Klien, H. (1989). An integrated control theory model of work motivation. *Academy of Management*, 14, 150–172.
- Korman, A. K. (1967a). Ethical judgments, self-perceptions and vocational choice. *Proceedings of the 75th Annual Convention of the American Psychological Association*, 2, 349–350.
- Korman, A. K. (1967b). Self-esteem as a moderator of the relationship between self-perceived abilities and vocational choice. *Journal of Applied Psychology*, 51, 65–67.
- Korman, A. K. (1970). Toward an hypothesis of work behavior. *Journal of Applied Psychology*, 54, 31–41.
- Larsen, R. J., & Ketelaar, T. (1991). Personality and susceptibility to positive and negative emotional states. *Journal of Personality and Social Psychology*, 61, 132–140.
- Lazarus, A. (1991). *Emotion and adaptation*. New York: Oxford.
- Lee, C., Ashford, S. J., & Jamieson, L. F. (1993). The effects of Type A behavior dimensions and optimism on coping strategy, health, and performance. *Journal of Organizational Behavior*, 14, 143–157.
- Lefcourt, H. M. (1991). Locus of control. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 413–499). San Diego, CA: Academic.
- Locke, E. A., McClellan, K., & Knight, D. (1996). Self-esteem and work. *International Review of Industrial/Organizational Psychology*, 11, 1–32.
- Lord, R. G., & Hanges, P. J. (1987). A control systems model of organizational motivation: Theoretical development and applied implications. *Behavioral Science*, 32, 161–178.
- Martocchio, J. J., & Judge, T. A. (1997). Relationship between conscientiousness and learning in employee training: Mediating influences of self-deception and self-efficacy. *Journal of Applied Psychology*, 82, 764–773.
- Mount, M. K., & Barrick, M. R. (1995a). The Big Five personality dimensions: Implications for research and practice in human resources management. *Research in Personnel and Human Resources Management*, 13, 153–200.
- Mount, M. K., & Barrick, M. R. (1995b). *The Personal Characteristics Inventory manual*. Unpublished manuscript, Iowa City, IA.

- Ones, D. S. (1993). *The construct validity of integrity tests*. Unpublished doctoral dissertation, University of Iowa.
- Ones, D. S., Mount, M. K., Barrick, M. R., & Hunter, J. E. (1994). Personality and job performance: A critique of the Tett, Jackson, and Rothstein (1991) meta-analysis. *Personnel Psychology*, *47*, 147-156.
- Ones, D. S., Viswesvaran, C., & Reiss, A. D. (1996). Role of social desirability in personality testing for personnel selection: The red herring. *Journal of Applied Psychology*, *81*, 660-679.
- Ormel, J., & Wohlfarth, T. (1991). How neuroticism, long-term difficulties, and life situation change influence psychological distress: A longitudinal model. *Journal of Personality and Social Psychology*, *60*, 744-755.
- Peterson, C., & Seligman, M. E. P. (1984). Causal explanations as a risk factor for depression: Theory and evidence. *Psychological Review*, *91*, 347-374.
- Phillips, J. M., & Gully, S. M. (1997). Role of goal orientation, ability, need for achievement, and locus of control in the self-efficacy and goal-setting process. *Journal of Applied Psychology*, *82*, 792-802.
- Plomin, R., Chipuer, H. M., & Loehlin, J. C. (1990). Behavioral genetics and personality. In L. A. Pervin (Ed.), *Handbook of personality* (pp. 225-276). New York: Guilford.
- Rafaeli, A., & Sutton, R. I. (1989). The expression of emotion in organizational life. *Research in Organizational Behavior*, *4*, 237-271. Greenwich, CT: JAI.
- Robins, R. W., & John, O. P. (1997). The quest for self-insight: Theory and research on accuracy and bias in self-perception. In R. Hogan, J. Johnson, & S. Briggs (Eds.), *Handbook of personality psychology* (pp. 649-679). San Diego, CA: Academic.
- Rosenberg, M. (1979.) *Conceiving the self*. New York: Basic Books.
- Rosse, J. G., Miller, J. L., & Stecher, M. D. (1994). A field study of job applicants' reactions to personality and cognitive ability testing. *Journal of Applied Psychology*, *79*, 987-992.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, *80*(1, Whole No. 609).
- Roy, M. A., Neale, M. C., & Kendler, K. S. (1995). The genetic epidemiology of self-esteem. *British Journal of Psychiatry*, *166*, 813-820.
- Rynes, S. L., & Connerley, M. L. (1993). Applicant reactions to alternative selection procedures. *Journal of Business and Psychology*, *7*, 261-277.
- Salgado, J. F. (1997). The five factor model of personality and job performance in the European Community. *Journal of Applied Psychology*, *82*, 30-43.
- Sanna, L. J. (1992). Self-efficacy theory: Implications for social facilitation and social loafing. *Journal of Personality and Social Psychology*, *62*, 774-786.
- Scheier, M. F., Matthews, K. A., Owens, J. F., Magovern, G. J., Lefebvre, R. C., Abbott, R. A., & Carver, C. S. (1989). Dispositional optimism and recovery from coronary artery bypass surgery: The beneficial effects on physical and psychological well-being. *Journal of Personality and Social Psychology*, *57*, 1024-1040.
- Schuler, H. (1993). Social validity of selection situations: A concept and some empirical results. In H. Schuler, J. L. Farr, & M. Smith (Eds.), *Personnel selection and assessment: Individual and organizational perspectives* (pp. 11-26). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.
- Seligman, M. E. P., Abramson, L. Y., Semmel, A., & von Baeyer, C. (1979). Depressive attributional style. *Journal of Abnormal Psychology*, *88*, 242-247.
- Seligman, M. E. P., & Schulman, P. (1986). Explanatory style as a predictor of productivity and quitting among life insurance sales agents. *Journal of Personality and Social Psychology*, *50*, 832-838.
- Sherer, M., Maddux, J. E., Mercandante, B., Prentice-Dunn, S., Jacobs, B., & Rogers, R. W. (1982.) The self-efficacy scale: Construction and validation. *Psychological Reports*, *51*, 663-671.
- Smith, T. W., Pope, M. K., Rhodewalt, F., & Poulton, J. L. (1989). Optimism, neuroticism, coping, and symptom reports: An alternative interpretation of the Life Orientation Test. *Journal of Personality and Social Psychology*, *56*, 640-648.

- Smither, J. W., Reilly, R. R., Millsap, R. E., Pearlman, K., & Stoffey, R. W. (1993). Applicant reactions to selection procedures. *Personnel Psychology, 46*, 49–76.
- Spector, P. E. (1982). Behavior in organizations as a function of employee's locus of control. *Psychological Bulletin, 91*, 482–497.
- Staw, B. M., Sutton, R. I., & Pelled, L. H. (1994). Employee positive emotion and favorable outcomes at the workplace. *Organization Science, 5*, 51–71.
- Sutton, R. I., & Rafaeli, A. (1988). Untangling the relationship between displayed emotions and organizational sales: The case of convenience stores. *Academy of Management Journal, 31*, 461–487.
- Taylor, S. E. (1989). *Positive illusions: Creative self-deception and the healthy mind*. New York: Basic Books.
- Tett, R. P., Jackson, D. N., & Rothstein, M. (1991). Personality measures as predictors of job performance: A meta-analytic review. *Personnel Psychology, 44*, 703–742.
- Tett, R. P., Jackson, D. N., Rothstein, M., & Reddon, J. R. (1994). Meta-analysis of personality–job performance relations: A reply to Ones, Mount, Barrick, and Hunter (1994). *Personnel Psychology, 47*, 157–172.
- Tharenou, P. (1979). Employee self-esteem: A review of the literature. *Journal of Vocational Behavior, 15*, 316–346.
- Wanberg, C. R., & Banas, J. T. (1997). *A model of the predictors and outcomes of individual attitudes toward change*. Manuscript submitted for publication.
- Weiss, H., & Sherman, J. (1973). Internal–external control as a predictor of task effort and satisfaction subsequent to failure. *Journal of Applied Psychology, 57*, 132–136.
- Weiss, H. M., & Cropanzano, R. (1996). Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work. *Research in Organizational Behavior, 18*, 1–74.
- Wiggins, J. S. (Ed). (1996). *The five-factor model of personality: Theoretical perspectives*. New York: Guilford.

