

Dispositional Affect and Job Satisfaction: A Review and Theoretical Extension

Timothy A. Judge

Department of Management, University of Florida

and

Randy J. Larsen

Washington University

Over the past 15 years, researchers have paid increasing attention to the dispositional source of job satisfaction. This research, though not without its controversies, has provided strong evidence that job satisfaction is, in part, dispositionally based. In this article we review past research on dispositional influences on job satisfaction. The two areas most in need of future research attention are (a) which trait(s) should be included in investigations of the dispositional source of job satisfaction and (b) elucidating the theoretical processes underlying the effect of dispositions on job satisfaction. In attempting to facilitate future research in these two areas, we first provide an integrative review of the personality and affective traits relevant to the dispositional source of job satisfaction. Second, we discuss a number of theoretical processes and mechanisms, drawn largely from personality psychology, which may further illuminate the dispositional source of job satisfaction. We pay particular attention to a model that seeks to unify the literature on affect and personality and discuss how applications of this model may lead to greater understanding of the personological basis of job satisfaction. © 2001

Academic Press

One of the best exemplars of the renewed interest in the role of emotions and affective processes in the workplace is the literature on the dispositional

Address correspondence and reprint requests to Timothy A. Judge, Department of Management, Warrington College of Business, University of Florida, Gainesville, FL 32611. E-mail: judgeta@notes.cba.ufl.edu.

source of job satisfaction. Indeed, in the past few years, studies on the dispositional source of job satisfaction may be the most frequent area of investigation in both the job satisfaction and affect at work areas. Despite this interest, it is surprising how fragmented research in this area has been. Diverse sets of traits have been investigated, with little discussion of the relationships among the traits. Further, there is relatively little research that has attempted to integrate affective disposition with the broader literature on affect and emotions.

The purpose of this article is to provide a review and offer a theoretical extension of research on the dispositional source of job satisfaction. Toward that end, this article is organized in the following manner. First, a review of research on the dispositional source of job satisfaction is presented. This review concludes that the two areas most in need of future research are a systematic accounting of which traits are best suited to predict job satisfaction and an explication of the underlying theoretical processes that account for the observed relationships among personality, affect, and job satisfaction. Second, we provide an integrative discussion of traits and affect. Finally, we provide an in-depth discussion of theoretical processes that might help us better understand which affective and personality traits are most fruitful in investigating the dispositional source of job satisfaction. We propose a Stimulus–Organism–Response (S-O-R) model that seeks to link the literatures on personality structure, on the circumplex model of affect, and on theoretical processes that govern how individuals respond to their environment. In this discussion, we bring in numerous applications of these principles to research on the dispositional source of job satisfaction.

REVIEW OF THE LITERATURE

There has been recognition of individual differences in job satisfaction for as long as the topic of job satisfaction has been studied. Fisher and Hanna (1931) concluded that job dissatisfaction could be traced to emotional maladjustment, Hoppock (1935) determined that questions assessing emotional adjustment clearly separated satisfied and dissatisfied employees, Weitz (1952) found that workers' responses to a "gripe index" were predictive of job dissatisfaction, and Smith (1955) suggested that factory workers' susceptibility to monotony (a correlate of dissatisfaction) were rooted in personal and generalized dissatisfactions of the workers. Locke (1976) suggested the possible usefulness of looking at dispositional factors, but at that time few such studies had been carried out. It is only since the mid 1980s that the dispositional source of job satisfaction has been the focus of more than sporadic research attention. Since 1983, there have been roughly 20 studies formally investigating the dispositional source of job satisfaction, though many more have investigated personality traits and job satisfaction in the same study. Although a few of the early studies were criticisms of the approach (Cropanzano & James, 1990; Davis-Blake & Pfeffer, 1989; Gerhart, 1987; Gutek & Winter, 1992), these criticisms appear to have

subsided and few argue with the basic conclusion that a significant part of job satisfaction is rooted in individuals' personalities.

In organizing this literature, we split the research into two broad categories of studies. The first category, which we call *indirect studies*, seeks to demonstrate a dispositional basis to job satisfaction by inference. Typically, in such studies, disposition or personality is not measured, but is inferred to exist from a process of logical deduction or induction. The second group of studies, which we term *direct studies*, relates a direct measure of a construct purported to assess a personality trait to job satisfaction. Because many of these new studies have not been reviewed in much detail, and to provide a justification for the general thrust of this article, we provide a relatively in-depth review of the literature. In keeping with the above dichotomy, our review is organized by indirect and direct studies.

Indirect Studies

Pulakos and Schmitt (1983) found that individuals who expected their job to be psychologically rewarding were in fact more likely to find it rewarding. Specifically, the authors found that high school graduates' expectations of having their growth needs met by their prospective job were correlated .28 ($p < .05$) with intrinsic job satisfaction 20 months after the individuals had graduated. Though this study was not specifically concerned with testing the dispositional source of job satisfaction, Pulakos and Schmitt interpreted these findings as indicative that predispositions are an important source of job satisfaction.

Staw and Ross (1985), utilizing a large, longitudinal database, found that measures of job satisfaction were reasonably stable over a 2-year ($r = .42, p < .01$), 3-year ($r = .32, p < .01$), and 5-year ($r = .29, p < .01$) period. Staw and Ross further discovered that job satisfaction showed significant stability under situational change, even when individuals changed both employers and occupations over a 5-year period of time ($r = .19, p < .01$), though this stability was much lower than for individuals who changed neither occupation nor employer ($r = .37, p < .01$). Finally, the authors found that prior job satisfaction was a stronger predictor of current satisfaction ($b = .27, t = 14.07, p < .01$) than changes in pay ($b = .01, t = 2.56, p < .01$) or changes in status ($b = .00, t = 1.57, ns$).

Shortly after its publication, the Staw and Ross (1985) study was attacked on several fronts. Gerhart (1987) corrected several methodological flaws in the study. Although Gerhart's interpretation was more conservative regarding the dispositional source of job satisfaction, he "essentially replicated the Staw and Ross results using a younger sample of both men and women and a more sophisticated methodology which also controlled for changes in job complexity" (Davis-Blake & Pfeffer, 1989, p. 16). Gutek and Winter (1992) criticized the Staw and Ross design on the argument that frames of reference might shift over time and thus explain stability in job satisfaction (employees who change jobs may be no more or less satisfied than before because their standards used to judge the favorability of the job shift with the new job). Thus, according to

these authors, Staw and Ross may have erroneously attributed attitude stability to dispositional influences. (Of course, this argument ignores the possibility that frames of reference themselves might be dispositionally based.) Finally, Newton and Keenan (1991) found that job satisfaction scores had some stability over a 2-year period ($r = .24$, $p < .01$), but that mean levels of satisfaction changes significantly over the course of the study and these changes in satisfaction were affected by changes in employer. It should be noted that correlations address stability in rank orders but not stability of means; thus, even if the correlations were 1.0, average job satisfaction levels could have changed substantially over time.

More recently, Steel and Rentsch (1997) took a similar approach to Staw and Ross (1985) in showing significant stability in job satisfaction ($r = .37$) over a 10-year period for military employees. The stability was significantly stronger for employees performing similar work ($r = .46$, $p < .01$) than for those performing different work ($r = .23$, *ns*). Finally, the authors found both previous job satisfaction, present job characteristics, and changes in job characteristics all predicted Time 2 job satisfaction, with previous job satisfaction being the single most important predictor ($\beta = .20$, $p < .01$). Like the findings of Staw and Ross (1985), Steel and Rentsch's study provides support for both the dispositional and situational perspectives. There is significant stability in job satisfaction over relatively long time periods, but this stability decreases somewhat in the face of situational change. Moreover, prior satisfaction is as powerful a predictor of current satisfaction as are changes in job conditions.

In a provocative study, Arvey, Bouchard, Segal, and Abraham (1989) found significant similarity in the job satisfaction levels of 34 pairs of monozygotic (identical) twins reared apart from early childhood. The intraclass correlation (ICC) between the general job satisfaction of the twin pairs was .31 ($p < .05$). To rule out the possibility that this correlation was observed because the twins (as people with similar dispositions) selected themselves into similar work environments, or were selected into similar environments by the organization because of genetic effects on ability, Arvey et al. (1989) attempted to eliminate this explanation by controlling for jobs held, using the Dictionary of Occupational Titles (DOT) scales to classify jobs on four dimensions. Controlling for the DOT scales had little effect on the correlation (ICC = .29). Cropanzano and James (1990) criticized numerous aspects of the methodology employed by Arvey et al. (1989) (e.g., potential similarities in the environments in which the twins were raised may have caused similarities in satisfaction, monozygotic twins are not representative of the population). While Cropanzano and James' (1990) concerns about the Arvey et al. (1989) study are well taken, as Bouchard, Arvey, Keller, and Segal (1992) noted in reply, the authors do not introduce evidence to directly refute the evidence presented by Arvey et al. (1989).

Though this series of indirect studies can be credited for establishing interest in the dispositional perspective, they have an obvious limitation—they cannot demonstrate a dispositional source of job satisfaction. For example, the correlation between expectations to be satisfied and subsequent satisfaction may be due to the fact that individuals who expected to be satisfied were, in fact,

more satisfied because they expected—and subsequently received—better jobs (Gerhart, 1987). Similarly, though similarity in twins' job satisfaction levels certainly suggests a dispositional source of job satisfaction, it cannot rule out possible alternative explanations of the results, such as intelligence (Judge, 1992). Thus, these studies are suggestive but insufficient by themselves to give strong support to the dispositional approach. For this strong support, we look to studies that directly measured dispositional traits, which we review next.

Direct Studies

Although more recent studies on the dispositional source of job satisfaction have the common characteristic of directly measuring a trait that is related to job satisfaction, the specific traits that are measured in studies have varied widely. In fact, there are three classes of traits that have been investigated. These studies are reviewed by type of trait below.

Positive and negative affectivity. Research by Watson, Clark, and colleagues has suggested that affective disposition is composed of two facets: positive affectivity and negative affectivity. High energy, enthusiasm, and pleasurable engagement characterize Positive Affectivity (PA), whereas distress, unpleasurable engagement, and nervousness characterize Negative Affectivity (NA; Watson, Clark, & Tellegen, 1988). Later in this article, we have further comment about the nature of PA and NA.

Several studies have related both PA and NA to job satisfaction. As a purported measure of NA in two separate studies, Brief and colleagues correlated a trait anxiety measure with job satisfaction and found a significant links in both studies ($r = -.34, p < .01$; Brief, Butcher, & Roberson, 1995; $r = -.24, p < .01$; Brief, Burke, George, Robinson, & Webster, 1988). Agho, Mueller, and Price (1993), in a sample of hospital employees, found that both PA and NA were significantly correlated with job satisfaction ($r = .44, p < .01$, and $r = -.27, p < .01$, respectively). Levin and Stokes (1989) found that NA was significantly correlated with job satisfaction ($r = -.31, p < .01$); this relationship remained significant once job characteristics such as job autonomy and skill variety were controlled ($\beta = -.18, p < .01$). In a sample of employees working for various organizations, Necowitz and Roznowski (1994) found that NA was significantly negatively related to three facets of job satisfaction [work ($r = -.29, p < .05$), supervision ($r = -.22, p < .05$), and coworkers ($r = -.20, p < .05$)], but not two others [pay ($r = -.06, ns$) and promotions ($r = -.03, ns$)]. In a second study of students working on enriched and unenriched tasks, these authors found that NA was negatively correlated with task satisfaction ($r = -.25, p < .05$). In a longitudinal study of university employees, Watson and Slack (1993) found that, whereas NA was significantly negatively correlated with several job satisfaction facets at Time 1 and Time 2 (e.g., work satisfaction, $r = -.32, p < .05$, and $r = -.38, p < .05$, respectively), NA was not significantly correlated with overall job satisfaction at Time 1 ($r = -.09, ns$) or Time 2 ($r = -.18, ns$). Like NA, PA was not significantly correlated with every job satisfaction facet, but it was significantly correlated with overall job

satisfaction at Time 1 ($r = .29, p < .05$) and Time 2 ($r = .33, p < .05$). Connolly and Viswesvaran (2000) conducted a meta-analysis of 27 articles and found true score correlations of PA and NA with job satisfaction of .52 and $-.33$, respectively. Thus, it appears that both PA and NA are generally related to job satisfaction.

Core self-evaluations. Recently, Judge, Locke, and Durham (1997), drawing from several literatures, introduced the construct of core self-evaluations. According to Judge et al. (1997), core self-evaluations are fundamental premises that individuals hold about themselves and their functioning in the world. 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 evaluations. Judge et al. argued that core self-evaluation is a broad personality construct composed of several more specific traits as follows:

1. *Self-esteem.* 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).

2. *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). Thus, generalized self-efficacy represents individuals' perception of their ability to perform across a variety of situations. Generalized 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.

3. *Neuroticism.* Neuroticism is one of the traits from the five-factor model of personality, which is reviewed shortly. 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).

4. *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, while 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*.

Two published primary studies have related core self-evaluations to job satisfaction. Judge, Locke, Durham, and Kluger (1998), analyzing data across three samples, found that core self-evaluations had a "true score" total effect of .48 on job satisfaction when both constructs were self-reported by employees and

a “true score” effect of .37 when core self-evaluations were measured independently (by a significant other). Judge, Bono, and Locke (2000) found that core self-evaluations correlated .41 ($p < .01$) with job satisfaction when both constructs were self-reported and .19 ($p < .05$) when core self-evaluations were reported by significant others. Judge and Bono (2001b) have completed a meta-analysis of 169 independent correlations (combined $N = 59,871$) on the relationship between each of the four core traits and job satisfaction. When the four meta-analyses are combined into a single composite measure, the overall corrected correlation is .37.

Other measures of affective disposition. There have been other measures of affective disposition used in investigating the dispositional source of job satisfaction. Staw, Bell, and Clausen (1986) utilized a unique data set where psychologists rated children on a number of characteristics, 17 of which the authors argued assessed affective disposition (“cheerful,” “warm,” and “negative”). Due to the panel nature of the study, Staw *et al.* (1986) reported various correlations between affective disposition and various measures of job satisfaction collected over the course of the study. Perhaps most impressive, however, were their results showing that affective disposition assessed at ages 12–14 correlated .34 ($p < .05$) with overall job satisfaction assessed at ages 54–62. Judge and Hulin (1993) and Judge and Locke (1993), utilizing distinct samples, found that employees’ responses to a neutral objects questionnaire was correlated with job satisfaction. The measure used in these studies, termed the Neutral Objects Satisfaction Questionnaire (NOSQ), was adapted from Weitz’s (1952) “gripe” checklist, which asked individuals to indicate their satisfaction with a list of facially neutral objects common to everyday life (your telephone number, your first name, the neighbors you have, and $8\frac{1}{2} \times 11$ in. paper). The idea was that individuals predisposed to be dissatisfied with such ostensibly neutral items are predisposed to be unhappy with most aspects of their lives, including their jobs. Both Judge and Hulin and Judge and Locke found that this measure of affective disposition was significantly correlated with facets of job satisfaction (average $r = .19$ in both studies). Despite favorable psychometric evidence for the measure (Judge & Bretz, 1993), it is unclear what construct this measure assesses. Furthermore, Judge *et al.* (1998) conducted a usefulness analysis and found that the NOSQ did not explain significant incremental variance in job satisfaction controlling for core self-evaluations, but core self-evaluations did controlling for the NOSQ measure. Thus, the NOSQ measure of affective disposition appears to be less useful than core self-evaluations in assessing the dispositional source of job satisfaction.

Areas for Future Research

Although research on the dispositional source of job satisfaction has made enormous strides, considerable room for further development exists. Early in this research stream, Davis-Blake and Pfeffer (1989) criticized dispositional research for its failure to clearly define or carefully measure affective disposition. To some extent, this criticism is still relevant. As the above review attests,

even those that have directly measured affective disposition have done so with fundamentally different measures. What traits and measures are best suited to predicting job satisfaction? Despite many studies on job satisfaction, there have been very few efforts to compare, contrast, and integrate these different conceptualizations and measures of affective disposition.

The above research need deals with which disposition is best suited to predict job satisfaction. Brief (1998) would turn this issue around in arguing that we need to consider *which job satisfaction is best suited to be predicted by affective disposition*. According to Brief (1998) and Brief and Weiss (2001), job satisfaction is a combination of affect (feelings) and cognition (thinking), but most measures of job satisfaction are overly cognitive in their orientation. If more emotion-laded measures were used, according to Brief, correlations of such job satisfaction measures with affective disposition would be stronger than they now appear. In support of his argument, Brief uses an earlier study (Brief & Roberson, 1989) which shows that cognition correlates more strongly (average $r = .70$) with job satisfaction than does affect (average $r = .43$.) A limitation in this study exposes the difficulty in operationally separating cognition and affect in job satisfaction research—affect correlated as strongly with their measure of cognitions as it did with job satisfaction. It is also important to note that this study, as well as others (Weiss, Nicholas, & Daus, 1999), clearly shows that *both* cognition and affect contribute to job satisfaction. To more fully understand job satisfaction, affects and cognitions must be studied as separate but related influences. The most important studies would take both influences into account.

Thus, in evaluating our jobs, as when we think about most anything consequential, both cognition and affect are involved. When we think, we have feelings about what we think. When we have feelings, we think about what we are feeling. Cognition and affect are thus related in our psychology, also perhaps even in our biology. Evidence indicates that when individuals perform specific mental operations, a reciprocal relationship exists between cerebral blood flow in areas specialized for processing emotions and those specific for cognitive processes (Drevets & Raichle, 1998). There are cognitive theories of emotion (Reisenzein & Schoenpflug, 1992) and emotion-based theories of cognition (Smith-Lovin, 1991). Researchers are concluding that emotion frequently plays a crucial role in high-level cognitive control processes (LeDoux, 1995; Cacioppo & Gardner, 1999). To illustrate the interrelatedness of emotion and cognition, the neurologist Damasio (1994) presents the case of Elliot, a businessman who developed a large brain lesion in his prefrontal cortex. Assessments of Elliot's memory, intelligence, and attention revealed that all of these abilities remained intact and were completely unaffected by his brain lesion. However, Elliot lost the ability to experience emotion. Elliot began to behave irrationally in his business dealings, making unsound and seemingly illogical decisions. Damasio (1994) argues that Elliot lost the guiding power of emotional reactions. Higher level cognition, Damasio argues, relies on evaluative input in the form of emotion, and so cognition and emotion are interwoven in our psychological architecture. Affect and cognition can and should be studied as

separate and separable influences on job satisfaction. However, researchers should realize that the two processes are highly related. Separating them is easier in theory than in practice.

What we are objecting to is (a) The characterization of measures of job satisfaction as either cognitive or affective (such measures are necessarily both) and (b) the need to develop new, affectively saturated measures of job satisfaction or to replace measures of job satisfaction with "work affect" measures. Cognition and affect can help us better understand the nature of job satisfaction, but they are not substitutes for job satisfaction any more than the accumulated body parts of a cadaver substitute for a living human. We wish to reiterate, however, that we endorse further research on the affect, emotions, and job satisfaction. These sources of job satisfaction have been virtually ignored in the literature and further study is needed, as Brief and Weiss (2001) persuasively argue. We simply do not believe that new measures of job satisfaction, without further evidence, are required to study the affective nature of the concept. It is our hypothesis that a broad, well-validated measure of job satisfaction is capable of reflecting both of these related influences, though, as Brief and Weiss note, the research designs and approaches needed to accomplish this will need to be broadened.

Turning our attention to the broader issue of theoretical development (or lack thereof) in the literature, the call for greater conceptual grounding in investigations of personality and organizational behavior is, by now, becoming an old refrain. Weiss and Adler (1984) and Adler and Weiss (1988), in reviewing the role of personality in industrial/organizational psychology, explained that the generally disappointing results are due to improper theoretical development. This concern has been echoed repeatedly in reviews of the literature on the dispositional source of job satisfaction as follows: (1) ". . . none of this research attempts to specify, a priori, a causal model of job attitudes" (Davis-Blake & Pfeffer, 1989, p. 393); (2) "It has been noted that it is particularly important for future research to address the psychology of the process, drawing from existing theories" (Judge, 1992, p. 67); (3) "It is imperative that those interested in dispositional research do a better job of theoretically linking dispositions and situations in predicting outcomes . . . theory building should specify what outcomes are being predicted and why" (House, Shane, & Herold, 1996, p. 218); (4) "Although many traits have been shown to correlate significantly with job satisfaction, most research with personality has done little more than demonstrate relations without offering much theoretical explanation" (Spector, 1997, p. 51); (5) "Past dispositional research has lacked strong theory" (Judge et al., 1997, p. 182); and (6) "The need for explanation is a . . . concern that has been voiced about the dispositional approach to job attitudes" (Brief, 1998, p. 93). Given these repeated calls, it is startling how little progress has been made in understanding psychological processes underlying the dispositional source of job satisfaction. Although the exceptions are noteworthy (Brief, 1998; Motowidlo, 1996; Weiss & Cropanzano, 1996), it remains a relatively theoretical area of research.

There are other areas in need of research in investigating the dispositional

source of job satisfaction. For example, more research needs to link dispositional traits to actual behaviors. More interactive models need to be tested. However, we believe two broad areas are most in need of further research: (1) Which traits are best suited to predict job satisfaction and how might the various traits be integrated? and (2) What theoretical processes might illuminate the ways in which these disposition sources influence job satisfaction? Accordingly, we devote the rest of this article toward addressing these two basic questions.

THEORETICAL PROCESSES

As an affective phenomenon, job satisfaction may be influenced by both positive and negative affects (Connolly & Viswesvaran, 2000). Hence, we need to understand the dispositional processes that influence these two affects. We believe the personal characteristics that people bring to the job each day (i.e., personality) influence job satisfaction primarily through these affective processes.

In this section we present some of the major descriptive systems for conceptualizing personality, especially as they relate to long-term affect and job satisfaction. We focus on the currently popular "Big Five" taxonomy. In terms of affect, we review the circumplex model for describing major dimensions (e.g., Larsen & Diener, 1992). Throughout we emphasize the dispositional perspective on affect, which views affective dimensions as generalized traits or average tendencies to react in certain ways to specific classes of stimuli. We then present a model for integrating affect with personality. This model highlights two aspects of the emotional response system: the input side, which refers to sensitivity or differential thresholds for responding to affective stimuli, and the output side, which refers to the different ways people control or modulate their emotional responses. This model leads us to consider the theoretical mechanisms or processes that underlie characteristic emotional style. That is, we move beyond the descriptive level and consider what theoretical mechanisms may be responsible for creating and maintaining individual differences in emotional reactions.

We then discuss two ways this model of personality and affect may be useful for research on work and job satisfaction. First, we present evidence that certain personality traits directly dispose people to be more or less reactive to hedonic stimuli, especially cues about impending punishment or reward, or aversive and incentive motivation, respectively. Clearly, the workplace is full of affective stimuli of the kind we discuss, including rewarding and reinforcing stimuli, as well as frustrating (the absence of expected reward) and punishing stimuli. Second, we present evidence that other personality traits indirectly dispose people to modulate their emotional reactions. These indirect effects include differences in how people perceive or think about hedonic stimuli, differences in the kinds of hedonically toned situations into which people self-select in their everyday lives, and differences in how people manipulate and evoke recurring emotional themes in their everyday lives, including their work lives. We begin with a review of the major dimensions of personality.

Structure of Personality: The “Big Five” Dimensions

A perennial question in personality psychology concerns the nature and number of the fundamental or irreducible dimensions of personality. This question highlights the notion that individual personalities are combinations of a few basic ingredients or traits. Historically, while physicists and chemists were searching for the basic physical elements, personality psychologists were searching for the basic units or building blocks of human nature. Many answers as to the number and nature of basic personality traits have been proposed, based on different criteria, resulting in several taxonomies of personality.

In personality psychology today, one taxonomy is enjoying widespread acceptance. This is the so-called “Big Five” taxonomy (Digman, 1990). In developing this taxonomy, researchers began with a very straightforward criterion; if a personality trait were important to social functioning, then in the development of language we would invent many words (mostly adjectives) to describe people who have or do not have this trait. For example, suppose in our ancestral past that it was very important to know whether a given person was conscientious. If so, the lexical argument goes, society would have developed many words to describe people *with* this trait (e.g., careful, meticulous, prudent, exacting, thorough, and punctilious) and many words to describe people *without* this trait (e.g., unreliable, careless, lax, messy, lazy, and sloppy).

The idea that socially important traits have become encoded in our language, and that we can discover those traits by analyzing language, is known as the lexical hypothesis. Although a simple notion (Block, 1995), it leads to rather powerful implications. One implication is that, beginning with the collection of adjectives used to describe persons, researchers could distill the major dimensions of personality. Applied to the English language, such analyses have consistently revealed a remarkably replicable structure consisting of five factors. Moreover, the analyses of other languages—from Japanese to Russian, to Chinese to Spanish, to German to Croatian—have resulted in very similar five-factor structures, suggesting that different linguistic cultures have generated very similar ways of talking about and categorizing important individual differences.

This structure has come to be called the Big Five or the Five-Factor Model. [As noted by a reviewer, Goldberg & Saucier (1995) distinguish the Big Five—in specific reference to phenotypic or observed traits—from the Five-Factor Model—in specific reference to genotypic or underlying traits, even though the five traits in both cases are the same.] The first researcher to replicate the five-factor structure was Warren Norman (1963), who is generally credited with coining the term “Big Five” [though Norman also credits Tupes and Christal (1961) for their five-factor reanalysis of Cattell’s data]. The five dimensions are Extraversion (or Surgency), Neuroticism (or Emotional Instability), Agreeableness, Conscientiousness, and Openness (or Culture). Samplings of adjectives that describe each of these are presented in Table 1.

The Big Five model of personality, while widely accepted today (though see Block, 1995, for a critical review), represents mainly a descriptive and not an

TABLE 1

Norman's (1963) Markers for the Big Five Personality Traits

I. Surgency (Extraversion)	talkative–silent sociable–reclusive adventurous–cautious open–secretive
II. Agreeableness	good-natured–irritable cooperative–negativistic mild/gentle–headstrong not jealous–jealous
III. Conscientiousness	responsible–undependable scrupulous–unscrupulous persevering–quitting fussy/tidy–careless
IV. Emotional Stability (Low Neuroticism)	calm–anxious composed–excitable not hypochondriacal–hypochondriacal poised–nervous/tense
V. Culture (Openness)	intellectual–unreflective/narrow artistic–nonartistic imaginative–simple/direct polished/refined–crude/boorish

explanatory system. That is, this taxonomy does not say how these traits develop, how they are maintained, or how they might be changed. Instead, this system represents a first step in scientific understanding: description. The second step is explanation, and here proponents of the Five-Factor Model are on weaker grounds. Judge, Locke, and colleagues' conception of core self-evaluations comes closer to providing an explanation of the dispositional source of job satisfaction, but more research is needed as to how core self-evaluations fit within the five-factor framework. Later in this section we introduce some theoretical developments that may help explain some of the Big Five traits, especially as these traits relate to affective response tendencies. But first we turn to a brief discussion of the major dimensions of affect.

Structure of Dimensional Affect: The Circumplex Model

There are two basic views on the conceptual nature of the affect domain. One view—the primary emotions view—holds that the domain of affect is best conceptualized as a set of categorical or fundamental (by some criterion) emotions. Primary emotion theorists often propose lists of usually between five to nine basic emotions, defined by such criteria as unique facial expressions,

distinct action tendencies, or adaptive significance from an evolutionary perspective. This view is sometimes called the categorical view because it conceptualizes the affect domain as consisting of distinct categories. In contrast to this view that holds that the affect domain is represented by a small set of underlying dimensions, not distinct categories. This view is called the dimensional view and it is similar to the elemental view of personality discussed above, suggesting that all emotional experiences are blends of a few affective dimensions. Valence (from pleasant to unpleasant) and arousal are the dimensions used by many researchers who take the dimensional view of affect (e.g., Lang, Bradley, & Cuthbert, 1992). Some researchers have sought to integrate the dimensional and categorical models together (e.g., Russell & Barrett, 1999).

Zelenski and Larsen (in press) discuss how the dimensional is more appropriate than the categorical view for representing longer term or dispositional affect. These authors present evidence that, for example, people who have a great deal of sadness in their daily lives also have much anger. These researchers monitored people's emotions three times a day, every day, for 1 month and found that people who frequently had episodes of the one kind of negatively valenced emotion (anger) also frequently had episodes of the other negative emotions (sadness). Subjects were rarely angry and sad *at the same time*. Nevertheless, people who were frequently angry were also frequently sad over the long term. This is consistent with the dimensional view that would posit an underlying dimension of general negative affect, of which anger and sadness are specific instances (Watson & Clark, 1984). That is, some people may be disposed to generalized negative emotions and experience all manner of unpleasant feelings over time, such as hostility, annoyance, anxiety, anger, irritation, worry, fear, and frustration. Dispositional affect thus refers to broad dimensions of hedonic experience, such as negative affectivity or positive affectivity, and these affective traits characterize stable individual differences (Levin & Stokes, 1989; Watson, 2000).

Within the dispositional view of affect, one model predominates. This is called the circumplex model and its essential features are presented in Fig. 1. Discussions of the circumplex model can be found in Larsen and Diener (1992) as well as a recent issue of the *Journal of Personality and Social Psychology* devoted to the structure of affect (Diener, 1999). A discussion of the circumplex model in relation to job satisfaction can be found in Warr (1999). Before discussing the circumplex model in detail, we should note that the model has its detractors (see Tellegen, Watson, & Clark, 1999).

A few unique features distinguish circumplex models. First, circumplex models are two-dimensional. For example, a map of the Earth can be represented in two dimensions (longitude and latitude). All points on the Earth can be uniquely described using as reference coordinates these two dimensions. So, by stating that the affect domain is a circumplex, we are stating that all points in this domain can be described using the coordinates of two dimensions. A second feature of circumplex models is that they lack simple structure. That is, no matter which two dimensions are located as the primary coordinates, there will always be individual attributes that lie *between* those coordinates.

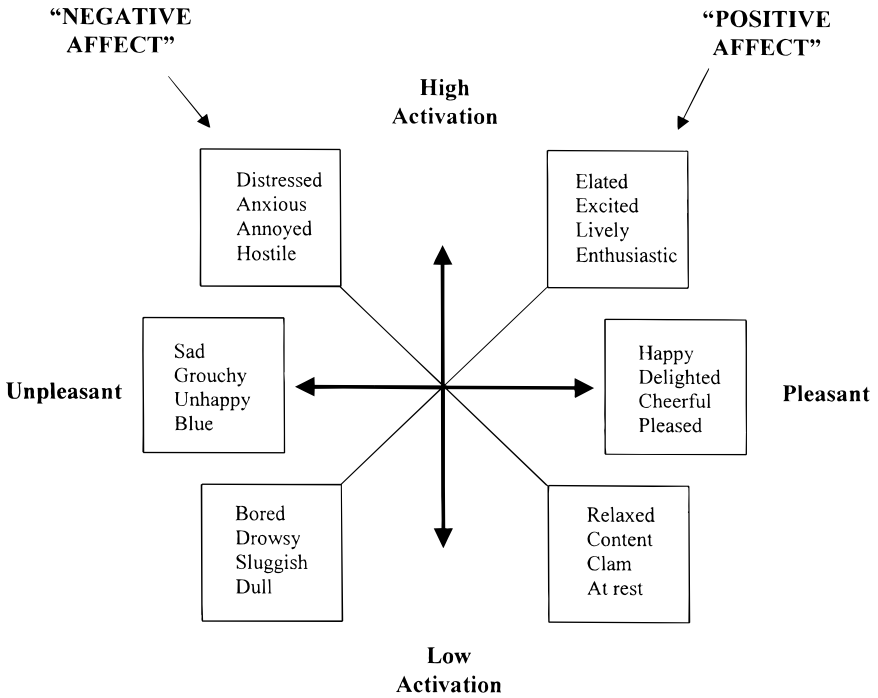


FIG. 1. Circumplex model of emotion.

This is to say that individual emotions will array around any two linear reference dimensions in an approximately circular arrangement. This makes the location of reference dimensions somewhat arbitrary, though theory *can* be of use in the determination of the best location. A third characteristic is that two dimensions at a right angle to each other (orthogonal) will provide the maximum information about the location of individual attributes in the circumplex space. This geometric truism implies that reference axes in a circumplex model should be orthogonal.¹

The model presented in Fig. 1 represents the circumplex with the primary coordinates (shown in heavy lines) of pleasure–displeasure and high–low activation (or arousal). These two coordinates are descriptively useful because they capture two maximally different aspects of the affect domain. The pleasure–displeasure dimension captures the hedonic continuum, with all emotions on the left side being unpleasant states and all emotions on the right side being pleasant states. High-to-low activation captures a continuum from sleep to extreme levels of alertness, engagement, and arousal and is not generally characterized by any hedonic content.

¹ The assumption of orthogonality continues to be debated. Some studies have supported zero (or near zero) correlations among PA and NA while others have reported moderately strong negative correlations. Resolution of this issue is beyond the scope of this article though we would note that Yik, Russell, and Barrett's (1999) analysis suggested that the Larsen and Diener (1992) circumplex, with its dimensions of hedonic valence and activation, appears to resolve some of the controversies over bipolarity and independence.

From a dispositional view of affect, the diagonal coordinates of the pleasure-by-activation circumplex have received a good deal of attention. For example, the emotions at the upper left octant have been referred to as negative affect, and those at the upper right octant have been referred to as positive affect. A dispositional measure of these emotions has been published and widely used in emotion research (the Positive and Negative Affect Schedule, or PANAS; Watson *et al.*, 1988). Work on the correlates of these two orthogonal affective dispositions is fast accumulating (Watson, 2000).

Applied to job satisfaction, it is our view, as well as others' (e.g., Cropanzano, James, & Konovsky, 1993; Warr, 1999), that the circumplex might best be thought of as consisting of pleasure versus displeasure at various levels of activation. As such, in Fig. 1 we have provided four emotion adjectives to anchor six octants of the emotion circumplex. Because of the measurement implications of the circumplex (e.g., attributes located directly opposite from each other on the circumplex are correlated -1.0), these six octants actually represent only three bipolar dimensions. Selecting the high activation end to name the bipolar dimensions, we have a dimension of Negative Affect (NA) which, as noted above, refers to frequent experiences of distress, anxiety, or annoyance and infrequent experiences of relaxation, contentment, or calm. At 90° to this (and hence orthogonal) is the dimension of Positive Affect (PA) referring to frequent experiences of enthusiasm, elation, and excitement and infrequent experiences of boredom or feelings of dullness or sluggishness.

To characterize persons, dispositional affect is best thought of as a person's *average* level, their typical amount of a given emotion. The trait view is concerned with, other things being equal, determining the person's "expected value" on some emotion. For example, if we averaged out all the momentary and situational influences on affect, what would be the person's base level of PA or NA? Persons high in NA will exhibit, on average, higher levels of distress, anxiety, and dissatisfaction, and they tend to focus on the unpleasant characteristics of themselves, the world, the future, and other people (Larsen & Ketelaar, 1989, 1991). As such, high-NA people are often viewed as "complainers" in the sense that they appear dissatisfied with their circumstances, with other people, with their own characteristics (e.g., they complain about health problems; Larsen, 1992). Moreover, high-NA persons appear vigilant for impending problems and are pessimistic about the future (Necowitz & Roznowski, 1994; Schonfeld, 1996). In terms of PA, high levels of energy and engagement with the environment, optimism, and social interest characterize persons who are high on this affective dimension. Others see high-PA persons as enthusiastic, optimistic, and actively involved with life. High-PA persons tend to have optimistic expectations about the future and are highly sociable, preferring the company of others to isolation (Watson, 2000).

The dimensions of PA and NA, assessed as dispositional tendencies, are empirically separable if not completely orthogonal and may in fact represent neurologically or at least psychologically distinct affective systems. The implications of this affective distinctiveness are important, as this implies that positive and negative affect have distinct causes (e.g., the absence of what

makes one unhappy will not necessarily make one happy), have separate correlates, and may be quite different in terms of underlying theoretical processes.

We present some evidence below that PA and NA dimensions may be the most proximal dispositional influences on job satisfaction. That is, when it comes to affect, PA and NA may be thought of as the "Big Two" (Tellegen, 1985). However, the main hedonic dimension in the circumplex, running between PA and NA, may also be empirically useful in assessing generalized dispositional satisfaction, as this dimension purely contrasts pleasant and unpleasant affective states. The measurement implications for assessing the main dimensions of the affect circumplex in dispositional terms are discussed in more detail in Larsen and Diener (1992) and in Warr (1999). A recent general guide to measuring affect, discussing the pros and cons of several methods, can be found in Larsen and Fredrickson (1999).

What specifically do we mean by the assertion that PA and NA dimensions may be the most proximal influences on job satisfaction? Due to their affective content and emotional nature, we believe that PA and NA are less distal in terms of their relation to job satisfaction than are the Big Five personality traits or perhaps even Judge, Locke, and colleagues' concept of core self-evaluations. The more proximal nature of PA and NA in this context has advantages and disadvantages. One disadvantage is that PA and NA are less trait-like than the Big Five traits and are probably less stable (Judge & Bretz, 1993) than other measures of affective temperament. Further, if PA and NA are less distal, it may explain that they may be more susceptible to environmental influences. For example, Judge and Locke (1993) found that trait PA and NA loaded on the same factor as life satisfaction. The advantage of PA and NA, however, is that they may be more powerful predictors of job satisfaction than other traits. A usefulness analysis conducted by Judge et al. (1998), for example, found that PA and NA generally explained more incremental variance in job satisfaction than did other measures of affective disposition. Furthermore, as we discuss below, we believe the emotional circumplex may be particularly useful in exploring some of the processes by which personality influences job satisfaction. Despite our view that PA and NA may be more proximal influences on job satisfaction, we do not feel this in any way argues against continued research on the relationship of the five-factor model or core self-evaluations on job satisfaction. In fact, we believe these literatures can be integrated, and shortly we present a schematic framework for organizing the five-factor model of personality and the PA/NA model of affect.

Relation of Core Self-Evaluations to Affect Circumplex and the Five-Factor Model

Although the integration of the affect circumplex within the five-factor model [PA with extraversion (though this fit is far from perfect) and NA with neuroticism] is fairly clear, there is a dearth of evidence on the relationship of these traits to Judge, Locke et al.'s core self-evaluations concept. Judge, Locke, and

colleagues have considered neuroticism to be one indicator of core self-evaluations, and evidence also suggests that NA loads on a core self-evaluations factor. Thus, it could be argued that core self-evaluations represents the same latent trait as NA and neuroticism. However, just as PA/NA may be more proximal influences on job satisfaction than the Big Five traits, so may core self-evaluations. For example, Judge and Bono's (2001b) meta-analysis revealed that of the core traits, neuroticism displayed the weakest correlation with job satisfaction. As with PA and NA, the affect nature of the core traits may cause them to be more proximal influences job satisfaction. On the other hand, it is possible that core self-evaluations may be a "meta-trait" that reflects several of the Big Five traits. Judge and Bono (2001a) show that, while self-esteem is most highly correlated with neuroticism, it also shows moderately strong relations with extraversion and conscientiousness. Perhaps like the construct of integrity, which displays higher correlations with job performance than any of the individual Big Five traits, but which is composed of three of the traits (Ones, 1993), core self-evaluations may be a broad trait in the same fashion. Future research is needed to disentangle these issues.

As Brief (1998) has noted, core self-evaluations are not purely affective in that they do not directly assess affect. On the other hand, neither do the traits from the five-factor model, in which PA/NA are argued to fit (Brief, 1998; Watson, 2000). Is it that the explicitly affective traits—PA and NA—are not synonymous with core self-evaluations or the five-factor model and instead mediate the effect of these traits on job satisfaction? Or is it possible to integrate all three of these trait frameworks (core self-evaluations, five-factor model, and PA/NA) under one structural framework? Or is it that core self-evaluations is relevant to job satisfaction because the traits most strongly influence job cognitions, PA/NA are relevant to job satisfaction because they influence affective events and processes relevant to work, and the Big Five are relevant because of behavioral processes that lead to job satisfaction? Though we cannot fully answer these questions at present, the model we offer in the next section of the article is an attempt to propose some potential answers.

Before doing so, we wish to raise one final point in this section. One particularly important area for future research is on how emotions mediate the relationship between personality and job satisfaction. These emotions may be best represented by discrete categories of emotions. Alternatively, as suggested by Zalenski and Larsen (in press), a dimensional view may be more appropriate. Future research is needed on which theoretical approach is best suited to test the possible mediating role of emotions on job satisfaction. Regardless of which approach is best, the design needed to test the role of mood in job satisfaction must be as dynamic as the nature of mood and emotions themselves. Traditional cross-sectional, between-subjects designs assume that job satisfaction is stable, thus variations around the average level of job satisfaction are treated as measurement error. As Miner, Glomb, and Hulin (2001) have shown, much of the variation in job satisfaction across time is not stochastic, and this within-person variation is partly explained by affective events at work. Thus, studying the role of mood and emotions in mediating the dispositional source of job

satisfaction will necessarily involve changing our research designs to permit experience sampling (see Weiss *et al.*, 1999).

A Model of the Relation between Personality and Affect

There are three elements necessary to characterize an affective process. First there is a stimulus, such as an event, typically in the environment. Second, the stimulus occurs to a person or, more generally, to an organism. Certainly characteristics of the organism are highly influential in determining emotion. These characteristics may influence the organism's susceptibility to the stimulus or the nature of the organism's emotional response system. The third element in any affective process is the organism's response. Without an emotional response, a stimulus cannot be thought of as an emotional stimulus at all. Emotion lies in the whole Stimulus–Organism–Response nexus.

This nexus view of emotion can be expressed as the S-O-R model presented in Fig. 2. This model is useful because it parses the emotional process into two component processes: the stimulus-input side and the response-output side. Expressed differently, for any given emotional response, individuals may differ from each other because of differences in response to the stimulus or because of differences in modulating their response output (or both). We argue that this distinction between stimulus sensitivity and response modulation is useful precisely because different personality factors may influence these two component processes independently. If we think of job satisfaction as a function of PA and NA, then the S-O-R model is useful because it points to individual differences in sensitivity to specific work conditions as well as to individual differences in the control or modulation of affective responses in the workplace.

In the next section of this article we review personality theory and research which fits the S-O-R model. The best way to interpret this model is that certain personality characteristics *moderate* the relation between the stimulus and

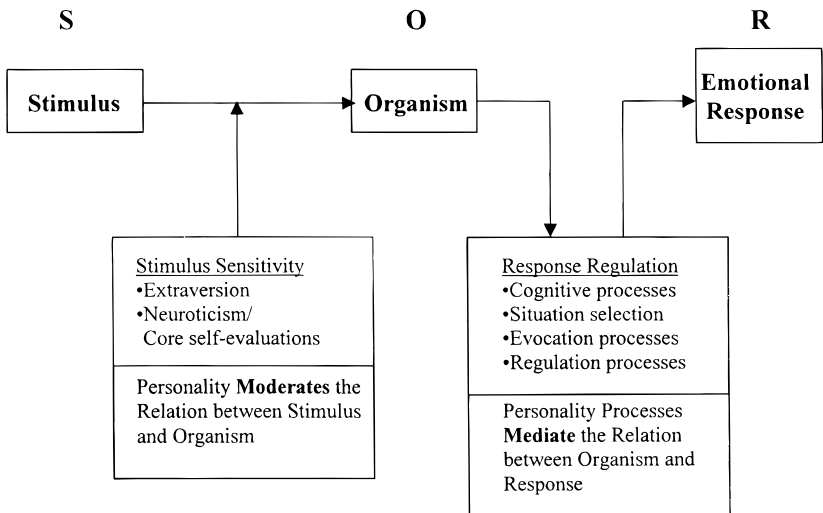


FIG. 2. S-O-R model of the role of personality in moderating and mediating affective responses.

the organism, and other personality processes *mediate* the relation between the organism and the response. Said differently, on the input side, personality may work by moderating sensitivity to specific stimuli, such that the same stimulus will be experienced differently by different people, depending on personality. On the output side, personality processes may act as mediators between organism and response. That is, response output may be mediated by certain processes and these processes may be different for different people. For researchers interested in job satisfaction, this view suggests we look at dispositional sources of affective sensitivity (the input side) as well as dispositional sources of affective modulation (the output side).

The Input Side: Individual Differences in Sensitivity to Affective Stimuli

The majority of research on personality and emotion has been correlational, and the most studied personality traits in this literature are extraversion and neuroticism. More than a dozen studies were published in the past decade showing robust correlations between Extraversion (E) and average PA and between neuroticism (N) and average NA (reviewed in Rusting & Larsen, 1997). (It should be noted that the correlation between N and NA is typically higher than between E and PA.) Extraversion and neuroticism are traits that show up in almost every typology of personality, are typically the two strongest traits (in terms of accounting for the most variance), and are the focus of several biologically based theories of personality (e.g., Depue, 1996; Eysenck, 1967; Gray, 1981, 1994). For example, Costa and McCrae (1980) measured E and N in their large longitudinal sample of adults in the Baltimore area. At a follow-up assessment 10 years later, they assessed average levels of PA and NA and found that E predicted PA and N predicted NA.

While many researchers have speculated that E and N represent differential sensitivity to PA and NA stimuli, respectively, correlational data do not provide the necessary support for such claims. For example, it could be that extroverts establish more supportive social networks than do introverts, and these supportive social networks lead to the higher levels of PA found among extroverts. Experimental evidence is needed where extroverts and introverts are exposed to identical levels of affective stimulation and differences in emotional responding are examined. Larsen and his colleagues have gathered experimental data on E and N and differential reactivity to emotion inductions in the laboratory. In four separate studies to date (Larsen & Ketelaar, 1989, 1991; Rusting & Larsen, 1999; Zelenski & Larsen, 1999), this team has found that E relates to differential susceptibility to positive mood inductions and that N relates to negative mood inductions. For example, in Larsen and Ketelaar (1989) pleasant and unpleasant moods were induced using false performance feedback (success and failure, respectively). PA and NA were assessed both before and after the mood induction. Extraversion predicted significant increases in PA to the success feedback, and Neuroticism predicted significant increases in NA to the failure feedback. The extension to individual differences in affective reactions to work-related feedback is obvious.

In terms of theoretical explanations for why E and N should relate to PA and NA, the most relevant theory is perhaps that proposed by Jeffrey Gray (1990, 1994). Called Reinforcement Sensitivity Theory (or RST), this is actually a revision of Eysenck's (1967) original theory of E and N. Eysenck proposed that E was linked to general cortical arousability (extroverts were less arousable and hence needed strong stimulation) and that N was linked to a lower threshold for activation in the limbic system. Gray proposed an alternative explanation by positing two separate brain mechanisms responsible for sensitivity to rewards and punishments. Gray suggested that extraversion is related to an enhanced sensitivity to cues of reward. Extroverts are mainly motivated by pleasure or reward, he argued, and so have a strong tendency to approach, even in novel situations. Extroverts expect rewards and are vigilant for possible sources of reward in the environment. Gray thus named the hypothesized neurological substrate for this individual difference the Behavioral Approach System (BAS). This system responds to rewards and incentives and generates positive affect.

Neuroticism, Gray hypothesized, is responsible for individual differences in response to cues of punishment and frustration. That is, high-N individuals are mainly motivated to avoid punishment and so have a strong tendency to inhibit their behavior, especially in novel environments. Gray thus named the hypothesized neurological substrate for this individual difference the Behavioral Inhibition System (BIS). Persons with a strong BIS are vigilant for signs of impending punishment or frustration in the environment and as such are sensitive to aversive stimuli. The BIS responds to punishment and aversive stimuli and is responsible for negative affect.²

Gray's theory has many interesting implications for understanding the dispositional source of job satisfaction. The theory would predict that persons with a strong BAS (high PA, extroverted, and positive core self-evaluations) respond more positively to workplace rewards and positive attributes of the job environment than individuals with a weak BAS. In contrast, individuals with a strong BIS (high NA, neurotic, and negative core self-evaluations) respond more negatively to workplace punishments and negative attributes of the job environment than individuals with a weak BIS. One interesting organizational implication of this theory is that job environments could be assessed in terms of their

² Gray's theory suggests a biological basis to dispositional affect. Indeed, abundant evidence suggests a prefrontal asymmetry in these two emotional states (reviewed in Cacioppo & Gardner, 1999). Assessed with EEG, PA is associated with left prefrontal activation, whereas NA is associated with greater relative right prefrontal activation (e.g., Davidson, 1993a). Research shows that when individuals smile, they have more activation in their left than right frontal hemispheres, while those exhibiting a facial expression of disgust show more activation in the right than left hemispheres (Davidson, Ekman, Saron, Senulis, & Friesen, 1990). Evidence further indicates that such measures of EEG asymmetry are stable over time, suggesting that they indicate some biological disposition or trait (Davidson, 1993b). Finally, evidence also demonstrates that EEG asymmetry indicates a vulnerability to positive or negative emotional states, whereby individuals with greater right side activation at rest subsequently report more intense *negative* emotional reactions to negative emotion-inducing events, and individuals with greater left side activation show the opposite pattern (Tomarken, Davidson, & Henriques, 1990).

available cues of reinforcement, reward, frustration, threat, and punishment. Though further research is needed, several studies already support this general extension of Gray's theory to the workplace. For example, Brief, Butcher, and Roberson (1995) found that high-NA individuals were less susceptible to positive mood induction such that they reported lower job satisfaction when given a small gift (i.e., cookies) than low-NA individuals. Stewart (1996) found a link between extraversion and reward sensitivity in a study of sales representatives.

An important implication of Gray's personality theory is that there may be, in part, biological constraints on PA and NA that work through direct mechanisms of responsiveness to hedonic stimuli. Some people may be "prepared" to respond with positive affect to certain stimuli, whereas others may be "prepared" to respond with negative affect. In an environment that is constant across persons, such as the work environment, this means that there will be individual differences in the impact of specific environmental features. Moreover, another important implication is that these two dimensions, even from a biological perspective, are empirically orthogonal. For example, if we made a two-by-two table, with one side labeled high and low PA, and the other high and low NA, then in the population we should find people distributed equally in all four cells. This implies that there are some people who are high in both reward and punishment sensitivity as well as others who are relatively low in both. People in the different quadrants of this 2×2 table will react differently to hedonic features of the environment, including that of the workplace.

Understanding the implications of individual differences in independent PA and NA susceptibilities will provide important directions for future research, especially concerning implications for job motivation and satisfaction. For example, how will people differentially respond to unpleasant events at work? How will different motivation programs affect people who differ in terms of sensitivity to incentives versus punishment or even negative reinforcement? Motivational programs can be phrased in terms of the gains (incentive framing) or in terms of the losses (aversive framing) associated with some specific topic. For example, getting employees to work together as a team can be phrased in terms of the benefits of doing so (increased productivity) or in terms of the losses of not doing so (being beaten by a competitor). These different framing strategies are likely to differentially appeal to specific persons.

Thus far we have emphasized individual differences in sensitivity to hedonic conditions. These may be limited by biological factors and best understood as characteristics that people bring with them to the job. However, with regard to the output side—controlling emotional responding—there may be more room for learning. That is, while people may have styles of responding to emotional events, they may nevertheless be able to change or adapt to new ways of controlling and regulating their emotions. In fact, the concept of emotional intelligence, which is popular these days and influencing theories of organizational behavior and management, may be nothing more than understanding how people effectively modulate their emotional reactions to and interactions with the environment. We turn now to consider the output side of our model of dispositional influences on emotional responding.

The Output Side: Individual Differences in Emotional Response Regulation

On the output side of Fig. 2 we indicate that personality processes mediate the relation between the organism and the response. What we mean by this is that certain processes subsumed in various personality variables are responsible for variance in responding. The personality variables are thus proxies that refer to specific psychological processes that in turn mediate the relation between organism and response. Personality variables are sometimes discussed as indirect or instrumental variables in emotion research (e.g., McCrae & Costa, 1986) in that personality refers to certain processes (e.g., attributional style, self-efficacy) and those processes are responsible for individual differences in emotional responding. The main questions for research here lie in understanding the processes whereby personality comes to influence emotional responses.

There is a growing literature on individual differences in the self-regulation of emotion and well-being. One way to organize this literature is to consider four broad categories of influences. One category we label *cognition* and refers to processes "in the head" that work to create differences between people in how they perceive, think about, and respond to various hedonic conditions. A few examples are selective attention, attributional style, and social comparison processes. The second broad category of mediating processes we call *selection*, and by this we refer to behavioral processes whereby people choose to be in certain kinds of situations. These situations may, in turn, influence the kinds of emotions the person is likely to experience. The third broad category we call *evocation*, and by this we refer to those processes whereby people change or influence the situations they are in, particularly the social aspects, in ways that foster particular kinds of emotions. For example, extraverts are more likely to get other people to like them, and being liked fosters PA. The last category we call *regulation*, which refers to explicit strategies and behaviors that people use to control how they are feeling and to cope with life events. We discuss each of these processes in a bit more detail.

Cognition. Attending to affective information in the environment is an important component of controlling one's emotional responses. Individuals may differ in attending to or processing such information, such as the personality variable of repressive coping. Persons with a repressive coping style are actually less attentive to negative affective information in the environment, plus they are less able to recall negative experiences (e.g., Cutler, Larsen & Bunce, 1993). Studies that look at encoding and recall of affective information may uncover other individual differences in how people attending to, process, and store hedonic information. For example, Rusting and Larsen (1998) used a word-fragment completion task to examine the relation between extraversion and neuroticism and the processing of hedonically pleasant and unpleasant words. We presented participants with partial stimulus word fragments which they completed, e.g., ANG __, could be completed as ANGER, ANGEL, or ANGLE; FEA __ could be completed as FEAR or FEAT; and JO __ could be completed as JOY or JOB. Each word fragment could be completed as an emotion term or as a nonemotion term. The second task was a reaction time task to stimuli

presented on a computer screen. Stimuli were words or faces that varied in valence, i.e., smiling or frowning, or words like *delighted* or *embarrassed*. Subjects judged whether stimuli were positive, neutral, or negative. The last task was simply to recall as many words as possible from those presented in the previous task. Results generally supported the predictions, so that extroverts (compared to introverts) recalled significantly more positive words, completed more words as positive, and made fewer errors in categorizing positive words. High neuroticism subjects (compared to low) showed preferential attention to and processing of the negative stimuli. See Rusting (1998) for an excellent discussion of cognitive paradigms that may be useful in personality research.

Another relevant cognitive process concerns what people do with the affective information once it is encoded. Some people may be more likely to engage in certain cognitive processes (e.g., rumination) that amplify the subjective effects of the stimuli. Using a thought sampling methodology, Larsen and colleagues (Larsen, Diener, & Cropanzano, 1987; Larsen, Billings, & Cutler, 1996) assessed what people thought about when exposed to various life events depicted in photographs. Participants' thoughts were content analyzed for the presence of cognitive operations we hypothesized would relate to stronger affective responses, e.g., personalizing and generalizing cognitions. Reliable differences between people were found in what they thought about while processing the photographs. For example, some people frequently would generalize from specific instances to come to more general conclusions, for example, when seeing a scene from a battlefield they start thinking about how human nature is violent at its core, how people can be inhuman to each other, and so on.

This literature suggests several avenues for future research on the dispositional source of job satisfaction. First, it seems likely that individuals with a negative affective disposition (e.g., high scores on neuroticism or NA or low scores on core self-evaluations) would be more likely to attend to, preferentially process, and store negative job experiences in memory. On the other hand, those with a positive affective disposition (e.g., high scores on PA, extraversion, or core self-evaluations) would more attend to (store in memory and later recall) positive job experiences. Second, there are differences in how people process affective information once it is encoded, and this is likely related to affective disposition. Judge and Locke (1993) found that dysfunctional thought processes mediated the relationship between affective disposition and job satisfaction, and other studies have supported differential cognitive processes for positive versus negative individuals (Brief et al., 1995; Necowitz & Roznowski, 1994). The point is that while there are many cognitive processes that may underlie the dispositional source of job satisfaction, there has been very little research on these. Our foregoing discussion was intended to illuminate some fruitful areas for future research.

Selection. Selection describes the manner in which we choose situations to enter. For example, it is obvious that we do not randomly choose our friends, our mates, our hobbies, our college classes, or our careers. Precisely how we

go about making these selections is, at least in part, a reflection of our personality. How we use our free time may especially be a reflection of our traits. One person may take up the hobby of parachute jumping, whereas another may prefer to spend time quietly gardening.

Applied to job satisfaction, the notion of selection has a couple of implications. First, people may self-select into occupations that are a poor match to their dispositional tendencies. In the case of poor fit, it would seem that efforts could be made to either change the job to fit the person or to change the person to fit the job (training). While there is no guarantee that people will always be happier in situations that fit their personality (Diener, Larsen, & Emmons, 1984), a better fit implies that personal needs are more likely to be met. Judge and Cable (1997), for example, found that individuals' culture preferences were strongly predicted by the five-factor model (e.g., extroverted job seekers preferred organizations that emphasized affiliation and teamwork). Efforts to study person-environment fit will require that we develop methods for characterizing situations and jobs to the same degree that we characterize personality. More research is needed that links personality traits to choice of situations and subsequent affective experiences on the job.

Evocation. Evocation refer to the reactions we produce in others, often quite unintentionally. To some extent, we create the social environments that we inhabit. A child with a high activity level, for example, may evoke in parents attempts to constrain the child, even though these attempts are not intended or desired by the child. A person who is physically attractive may evoke amorous advances from others, even if these advances are not desired. A person who is extremely intelligent may evoke feelings of intimidation in others, even if intimidation is not the goal. A fascinating example of the evocation process is a study by Megargee (1969) of dominance in leadership. This author found that men and women scoring high on the trait of dominance emerged as leaders when matched with low dominance individuals. The only exception was when high dominance women were matched with low dominance men (i.e., in this case, low dominance men were more likely to emerge as leaders). However, in a retrospective analysis of this situation, Megargee found that the high dominance women *appointed* their low dominant male partners to leadership positions. Thus, even in this situation, by controlling the process by which leadership was decided, dominant women were evoking their environments.

Another example of how this evocation process might be relevant to the dispositional source of job satisfaction is through the analysis of goals. In the subjective well-being literature, goals have been thought of as personal strivings (Emmons, 1992). Emmons (1986) found that having important goals was strongly associated with positive affect, irrespective of goal attainment. Emmons (1992) also found that individuals who had concrete personal strivings suffered less psychological distress than individuals who pursued abstract goals. More recent research on how goals contribute to well-being has been conducted by Elliot, Sheldon, and colleagues under the auspices of the self-concordance theory. Self-concordance theory, derived from Deci and Ryan's

(1985) self-determination theory, predicts that individuals are happiest when stated goals match enduring traits, interests, and values. The authors argue that self-concordance leads to well-being because (a) it enables individuals to put effort into goals, thus achieving them, and (b) people are more likely to have attained the goals that will make them happy (because the identified and intrinsic goals meet the needs of autonomy, competence, and relatedness).³

According to the self-concordance model, people may pursue four types of goals (see Sheldon & Elliot, 1998, p. 548): (1) *External*—striving toward a goal because of someone else's needs or desires or because of some distally valent outcome that will result from goal attainment (e.g., performing a task in order to earn money); (2) *Introjected*—striving toward a goal because the individual would feel ashamed, guilty, or anxious if he or she did not attempt it (e.g., cleaning one's office every day out of a sense of guilt); (3) *Identified*—striving toward a goal because the person really believes that it is an important goal to have (e.g., an experienced manager helps a new hire "learn the ropes" because she believes it is important to develop new employees); and (4) *Intrinsic*—striving toward a goal of the fun and enjoyment which the goal provides the person (e.g., attending a leadership development workshop because one enjoys developing one's skills rather than due to a belief that such activities are directly useful).

Sheldon and Elliot argue that goals pursued for identified or intrinsic reasons represent autonomous motives (because they are felt to emanate from self-choices that reflect deep-seated values), whereas goals pursued for extrinsic or introjected reasons represent controlled motives (because they emanate from forces outside the self to which the person does not give full assent). According to the self-concordance model, autonomous goals are more likely to lead to well-being than are controlled goals because goals pursued for the sake of enduring values are likely to have greater volitional strength, particularly in the face of obstacles. Indeed, Sheldon and Elliot have likened autonomous goals to approach motivation and controlled goals to avoidance motivation.

What are the implications of these results to the dispositional source of job satisfaction? We believe that self-concordance is a potentially important mediating mechanism because individuals with positive affective disposition (PA, positive core self-evaluations) are more likely to pursue self-concordant goals. Supporting this argument, Elliot and Sheldon (1997) found that self-esteem, one of the core self-evaluations traits, was negatively related to avoidance goals, and Elliot, Sheldon, and Church (1997) found that another core trait—neuroticism—also was related to avoidance strivings. At the other end of the mediational loop, there is ample evidence that autonomous or approach goals are associated with well-being, whereas controlled or avoidance goals are negatively related to well-being (Elliot & Sheldon, 1997, 1998; Elliot *et al.*, 1997; Sheldon & Elliot, 1999).

³ Although we use self-concordance theory as an example of evocation (situation selection), it is possible that self-concordance often is a result of reinterpretation (i.e., two people doing the same thing attribute the reason for doing it differently).

The generalization of these results to the job seems fairly direct. We would argue that positive individuals are more likely to evoke and pursue approach (identified, intrinsic) work goals, whereas negative individuals are more likely to evoke and pursue avoidance (extrinsic, introjected) goals. Consistent with Roberson (1990), who found that the proportion of negative goals listed by participants was negatively related to job satisfaction, we believe that approach goals are likely to lead to satisfaction and avoidance goals are more likely to lead to dissatisfaction.

Regulation. The last mediational process is one involving direct attempts to regulate how one is feeling. Persons may differ in the strategies they employ for mood regulation or in the frequency or successfulness of those mood-regulating behaviors. Some persons may employ fewer, less effective, or less frequent mood regulating behaviors. Some theorists have presented lists of specific strategies or behaviors for regulating mood (e.g., Morris, 1989, Morris & Reilly, 1987; Thayer, 1996). Recently, Larsen (in press) employed an act frequency approach to develop a taxonomy of mood-regulating strategies. Participants were asked to nominate acts they use for getting rid of an unpleasant mood. Larsen (in press) presents 25 nonredundant strategies and behaviors that people commonly use to cope with unpleasant events and feelings. The collection of acts was categorized along two dimensions. One dimension was cognitive versus behavioral, as some acts were cognitive strategies (reframing and social comparison), whereas others were clearly behavioral activities (problem directed action and making a plan to avoid problems in the future). The second dimension concerned the "directedness" of the acts. That is, some acts were directed at changing the person or how they were feeling (e.g., exercising, distraction, and helping others) whereas other acts which were directed more at changing the situation (seeking advice and putting the situation in perspective).

Larsen and Gschwandtner (1995) used daily diaries obtained at work to examine how salespersons attempt to regulate their feelings on the job, particularly in terms of responding to typical stresses associated with sales (e.g., high rejection rates, factory backlogs, and supervisor pressure). These researchers found many mood-regulating acts from lists of coping mechanisms, for example, downward social comparison, self-reward, distraction, socializing, venting, and the use of pharmacological agents. Other acts also were found, such as helping others, talking to a friend or mentor, future thinking, and praying. Exercising, which Thayer (1996) has advocated for mood regulation, was also common. Interesting sex differences also emerged. For example, Larsen and Gschwandtner (1995) found that, in the face of work stress, salesmen were much more likely than saleswomen to report exercising, whereas saleswomen were much more likely than salesmen to talk to a mentor or friend.

It seems likely that people will differ in the frequency and effectiveness of engaging in mood-regulatory activity. One would predict that emotionally stable employees would utilize more, or perhaps more effective, mood-regulatory strategies than less well-adjusted employees. Knowing how to regulate one's moods and emotional responses may be a large part of emotional intelligence, as

discussed above. Moreover, being able to do this successfully and consistently in the work environment may be a large part of job satisfaction. For example, a high-neuroticism employee may engage in withdrawal behaviors in response to dissatisfying job conditions, and thereby make the situation worse, whereas a less neurotic employee may proactively attempt to determine and fix the source of the dissatisfaction. Studying how people attempt to control their responses to the work environment would be an interesting avenue for future research relevant to job satisfaction.

CONCLUSION

We began this article by reviewing the existing research on the dispositional source of job satisfaction. We feel the research in this area is some of the most intriguing to be published in the organizational sciences in the past 2 decades. At the same time, the research has reached a critical moment in its relatively brief history. It seems clear that there is a personological basis to job satisfaction. However, at least two broad areas remain unclear: (1) what specific aspects of the person result in or contribute to job satisfaction and (2) how do the specific predispositions work to create job satisfaction—what are the mechanisms underlying this process?

In this article, we have tried to facilitate future research suggesting preliminary answers to these two questions. First, we have argued that two Big Five traits (neuroticism and extraversion) and two dimensions of affect (PA and NA) appear to be the traits and emotions best suited to predicting job satisfaction. We would also note, however, that core self-evaluations traits also appear promising in this context, and future research is needed to investigate the relationship of core self-evaluations to the Big Five traits and to the affect circumplex. As a preliminary answer to the second question about theoretical mechanisms, we presented a theoretical model, which we termed the S-O-R model, that suggests many possible avenues for future research. Research is needed on both the S-O and O-R parts of the model. In reviewing these aspects of the model, we noted numerous areas of potential application. It is our hope that this review, and the models presented herein, will help guide future researchers in seeking to better understand why personality appears to have such enduring and important relations with job satisfaction.

REFERENCES

- Adler, S., & Weiss, H. M. (1988). Recent developments in the study of personality and organizational behavior. *International Review of Industrial and Organizational Psychology*, 3, 307–330.
- Agho, A. O., Mueller, C. W., & Price, J. L. (1993). Determinants of employee job satisfaction: An empirical test of a causal model. *Human Relations*, 46, 1007–1027.
- Arvey, R. D., Bouchard, T. J., Segal, N. L., & Abraham, L. M. (1989). Job satisfaction: Environmental and genetic components. *Journal of Applied Psychology*, 74, 187–192.
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37, 122–147.
- Block, J. (1995). A contrarian view of the five-factor approach to personality description. *Psychological Bulletin*, 117, 187–215.

- Bouchard, T. J., Jr., Arvey, R. D., Keller, L. M., & Segal, N. L. (1992). Genetic influences on job satisfaction: A reply to Cropanzano and James. *Journal of Applied Psychology*, 77, 89–93.
- Brief, A. P. (1998). *Attitudes in and around organizations*. Thousand Oaks, CA: Sage.
- Brief, A. P., & Roberson, L. (1989). Job attitude organization: An exploratory study. *Journal of Applied Social Psychology*, 19, 717–727.
- Brief, A. P., & Weiss, H. M. (2001). *The affective dimensions of organizational behavior*. Working paper, Tulane University.
- Brief, A. P., Burke, M. J., George, J. M., Robinson, B. S., & Webster, J. (1988). Should negative affectivity remain an unmeasured variable in the study of job stress? *Journal of Applied Psychology*, 73, 193–198.
- Brief, A. P., Butcher, A., & 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.
- Cacioppo, J. T., & Gardner, W. L. (1999). Emotion. *Annual Review of Psychology*, 50, 191–214.
- Connolly, J. J., & Viswesvaran, C. (2000). The role of affectivity in job satisfaction: A meta-analysis. *Personality and Individual Differences*, 29, 265–281.
- Costa, P. T., & McCrae, R. R. (1980). Influence of extraversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, 38, 668–678.
- 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.
- Cropanzano, R., & James, K. (1990). Some methodological considerations for the behavior genetic analysis of work attitudes. *Journal of Applied Psychology*, 75, 433–439.
- Cropanzano, R., James, K., & Konovsky, M. A. (1993). Dispositional affectivity as a predictor of work attitudes and job performance. *Journal of Organizational Behavior*, 14, 595–606.
- Cutler, S. E., Larsen, R. J., & Bunce, S. C. (1996). Repressive coping style and the experience and recall of emotion: A naturalistic study of daily affect. *Journal of Personality*, 64, 379–405.
- Damasio, A. R. (1994). *Descartes' error: Emotion, reason and the human brain*. New York: Grossett/ Putnam & Sons.
- Davidson, R. J. (1993a). The neuropsychology of emotion and affective style. In M. Lewis & J. M. Haviland (Eds.), *Handbook of emotions* (pp. 143–154). New York: Guilford.
- Davidson, R. J. (1993b). Parsing affective space: Perspectives from neuropsychology and psychophysiology. *Neuropsychology*, 7, 464–475.
- Davidson, R. J., Ekman, P., Saron, C. D., Senulis, J. A., & Friesen, W. V. (1990). Approach/withdrawal and cerebral asymmetry. I. Emotional expression and brain physiology. *Journal of Personality and Social Psychology*, 58, 330–341.
- Davis-Blake, A., & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects in organizational research. *Academy of Management Review*, 14, 385–400.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Depue, R. A. (1996). A neurobiological framework for the structure of personality and emotion: Implications for personality disorders. In J. F. Clarkin & M. F. Lenzenweger (Eds.), *Major theories of personality disorder* (pp. 347–390). New York: Guilford.
- Diener, E. (1999). Introduction to the special section on the structure of emotion. *Journal of Personality and Social Psychology*, 76, 803–804.
- Diener, E., Larsen, R. J., & Emmons, R. A. (1984). Person \times situation interactions: Choice of situations and congruence response models. *Journal of Personality and Social Psychology*, 47, 580–592.
- Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41, 417–440.

- Drevets, W. C., & Raichle, M. E. (1998). Reciprocal suppression of regional cerebral blood flow during emotional versus higher cognitive processes: Implications for interactions between emotion and cognition. *Cognition and Emotion*, 12, 353–385.
- Elliot, A. J., & Sheldon, K. M. (1997). Avoidance achievement motivation: A personal goals analysis. *Journal of Personality and Social Psychology*, 73, 171–185.
- Elliot, A. J., & Sheldon, K. M. (1998). Avoidance personal goals and the personality-illness relationships. *Journal of Personality and Social Psychology*, 75, 1282–1299.
- Elliot, A. J., Sheldon, K. M., & Church, M. A. (1997). Avoidance personal goals and subjective well-being. *Personality and Social Psychology Bulletin*, 23, 915–927.
- Emmons, R. A. (1986). Personal strivings: An approach to personality and subjective well-being. *Journal of Personality and Social Psychology*, 51, 1058–1068.
- Emmons, R. A. (1992). Abstract versus concrete goals: Personal striving level, physical illness, and psychological well-being. *Journal of Personality and Social Psychology*, 62, 292–300.
- Eysenck, H. J. (1967). *The biological bases of personality*. Springfield, IL: Charles C. Thomas.
- Fisher, V. E., & Hanna, J. V. (1931). *The dissatisfied worker*. New York: Mcmillan
- George, J. M. (1996). Trait and state affect. In K. R. Murphy (Ed.), *Individual differences and behavior in organizations* (pp. 145–171). San Francisco: Jossey-Bass.
- Gerhart, B. (1987). How important are dispositional factors as determinants of job satisfaction?: Implications for job design and other personnel programs. *Journal of Applied Psychology*, 72, 366–373.
- 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., & Saucier, G. (1995). So what do you propose we use instead? A reply to Block. *Psychological Bulletin*, 117, 221–225.
- Gray, J. A. (1981). A critique of Eysenck’s theory of personality. In H. J. Eysenck (Ed.), *A model for personality* (pp. 246–276). New York: Springer-Verlag.
- Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Motivation and Emotion*, 4, 269–288.
- Gray, J. A. (1994). Personality dimensions and emotion systems. In P. Ekman & R. J. Davidson (Eds.), *The nature of emotion: Fundamental questions* (pp. 329–331). New York: Oxford Univ. Press.
- Gutek, B. A., & Winter, S. J. (1992). Consistency of job satisfaction across situations: Fact or framing artifact? *Journal of Vocational Behavior*, 41, 61–78.
- 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 Univ. Press.
- Hoppock, R. (1935). *Job satisfaction*. New York: Harper.
- House, R. J., Shane, S. A., & Herold, D. M. (1996). Rumors of the death of dispositional research are vastly exaggerated. *Academy of Management Review*, 21, 203–224.
- Judge, T. A. (1992). The dispositional perspective in human resources research. *Research in Personnel and Human Resources Management*, 10, 31–72.
- Judge, T. A., & Bono, J. E. (2001a). A rose by any other name . . . Are self-esteem, generalized self-efficacy, neuroticism, and locus of control indicators of a common construct? In B. W. Roberts & R. Hogan (Eds.), *Personality psychology in the workplace* (pp. 93–119). Washington, DC: American Psychological Association.
- Judge, T. A., & Bono, J. E. (2001b). Relationship of core self-evaluations traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability—with job satisfaction and job performance: A meta-analysis. *Journal of Applied Psychology*, 86, 80–92.
- Judge, T. A., & Bretz, R. D. (1993). Report on an alternative measure of affective disposition. *Educational and Psychological Measurement*, 53, 1095–1104.

- Judge, T. A., & Cable, D. M. (1997). Applicant personality, organizational culture, and organization attraction. *Personnel Psychology*, 50, 359–394.
- Judge, T. A., & Hulin, C. L. (1993). Job satisfaction as a reflection of disposition: A multiple-source causal analysis. *Organizational Behavior and Human Decision Processes*, 56, 388–421.
- Judge, T. A., & Locke, E. A. (1993). Effect of dysfunctional thought processes on subjective well-being and job satisfaction. *Journal of Applied Psychology*, 78, 475–490.
- Judge, T. A., Bono, J. E., & Locke, E. A. (2000). Personality and job satisfaction: The mediating role of job characteristics. *Journal of Applied Psychology*, 85, 237–249.
- 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.
- Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (1992). A motivational analysis of emotion: Reflex–cortex connections. *Psychological Science*, 3, 44–49.
- Larsen R. J., & Fredrickson, B. L. (1999). Measurement issues in emotion research. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 40–60). New York: Russell Sage Foundation.
- Larsen, R. J. (1992). Neuroticism and selective encoding and recall of symptoms: Evidence from a combined concurrent-retrospective study. *Journal of Personality and Social Psychology*, 62, 480–488.
- Larsen, R. J. (2000). Toward a science of mood regulation. *Psychological Inquiry*, 11, 129–141.
- Larsen, R. J., & Diener, E. (1987). Emotional response intensity as an individual difference characteristic. *Journal of Research in Personality*, 21, 1–39.
- Larsen, R. J., & Diener, E. (1992). Problems and promises with the circumplex model of emotion. *Review of Personality and Social Psychology*, 13, 25–59.
- Larsen, R. J., & Ketelaar, T. (1989). Extraversion, neuroticism, and susceptibility to positive and negative mood induction procedures. *Personality and Individual Differences*, 10, 1221–1228.
- Larsen, R. J., & Ketelaar, T. (1991). Personality and susceptibility to positive and negative emotional states. *Journal of Personality and Social Psychology*, 61, 132–140.
- Larsen, R. J., Billings, D. W., & Cutler, S. E. (1996). Affect intensity and individual differences in informational style. *Journal of Personality*, 64, 185–207.
- Larsen, R. J., Diener, E., & Cropanzano, R. S. (1987). Cognitive operations associated with individual differences in affect intensity. *Journal of Personality and Social Psychology*, 53, 767–774.
- Larsen, R. J., & Gschwandtner, L. B. (1995). A better day. *Personal Selling Power*, March, 41–49.
- LeDoux, J. E. (1995). Emotion: Clues from the brain. *Annual Review of Psychology*, 46, 209–235.
- Levin, I., & Stokes, J. P. (1989). Dispositional approach to job satisfaction: Role of negative affectivity. *Journal of Applied Psychology*, 74, 752–758.
- Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297–1343). Chicago: Rand McNally.
- McCrae, R. R., & Costa, P. T. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, 54, 385–405.
- Megargee, E. I. (1969). Influence of sex roles on the manifestation of leadership. *Journal of Applied Psychology*, 53, 377–382.
- Miner, A. G., Glomb, T. M., & Hulin, C. L. (2001). Addressing a methodological stalemate: Experience sampling mood and its correlates at work. Manuscript submitted for publication.
- Morris, W. N. (1989). *Mood: The frame of mind*. New York: Springer-Verlag.
- Morris, W. N., & Reilly, N. P. (1987). Toward the self-regulation of mood: Theory and research. *Motivation and Emotion*, 11, 215–249.
- Motowidlo, S. J. (1996). Orientation toward the job and organization. In K. R. Murphy (Ed.), *Individual differences and behavior in organizations* (pp. 175–208). San Francisco: Jossey-Bass.

- Necowitz, L. B., & Roznowski, M. (1994). Negative affectivity and job satisfaction: Cognitive processes underlying the relationship and effects on employee behaviors. *Journal of Vocational Behavior*, 45, 270–294.
- Newton, T., & Keenan, T. (1991). Further analyses of the dispositional argument in organizational behavior. *Journal of Applied Psychology*, 76, 781–787.
- Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal Psychology*, 66, 574–583.
- Norman, W. T. (1967). *2800 personality trait descriptors: Normative operating characteristics in a university population*. Department of Psychology, University of Michigan, Ann Arbor, Michigan.
- Ones, D. S. (1993). *The construct validity of integrity tests*. Unpublished doctoral dissertation, University of Iowa.
- Pulakos, E. D., & Schmitt, N. (1983). A longitudinal study of a valence model approach for the prediction of job satisfaction of new employees. *Journal of Applied Psychology*, 68, 307–312.
- Reisenzein, R., & Schoenpflug, W. (1992). Stumpf's cognitive-evaluative theory of emotion. *American Psychologist*, 47, 34–45.
- Roberson, L. (1990). Prediction of job satisfaction from characteristics of personal work goals. *Journal of Organizational Behavior*, 11, 29–41.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80 (1, Whole No. 609).
- Russell, J. A., & Barrett, L. F. (1999). Core affect, prototypical emotional episodes, and other things called emotion: Dissecting the elephant. *Journal of Personality and Social Psychology*, 76, 805–819.
- Rusting, C. L. (1998). Personality, mood, and cognitive processing of emotional information: Three conceptual frameworks. *Psychological Bulletin*, 124, 165–196.
- Rusting, C. L., & Larsen, R. J. (1997). Extraversion, neuroticism, and susceptibility to positive and negative affect: A test of two theoretical models. *Personality and Individual Differences*, 22, 607–612.
- Rusting, C. L., & Larsen, R. J. (1998). Personality and cognitive processing of affective information. *Personality and Social Psychology Bulletin*, 24, 200–213.
- Rusting, C. L., & Larsen, R. J. (1999). Clarifying Gray's theory of personality: A response to Pickering, Corr, and Gray. *Personality and Individual Differences*, 26, 167–172.
- Schonfeld, I. S. (1996). Relation of negative affectivity to self-reports of job stressors and psychological outcomes. *Journal of Occupational Health Psychology*, 1, 397–412.
- Sheldon, K. M., & Elliot, A. J. (1998). Not all personal goals are personal: Comparing autonomous and controlled reasons for goals as predictors of effort and attainment. *Personality and Social Psychology Bulletin*, 24, 546–557.
- Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, 76, 482–497.
- Smith, P. C. (1955). The prediction of individual differences in susceptibility to industrial monotony. *Journal of Applied Psychology*, 39, 322–329.
- Smith-Lovin, L. (1991). An affect control view of cognition and emotion. In J. A. Howard & P. L. Callero (Eds.), *The self-society dynamic: Cognition, emotion, and action* (pp. 143–169). New York: Cambridge Univ. Press.
- Spector, P. E. (1997). *Job satisfaction*. Thousand Oaks, CA: Sage.
- Staw, B. M., & Ross, J. (1985). Stability in the midst of change: A dispositional approach to job attitudes. *Journal of Applied Psychology*, 70, 469–480.
- Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly*, 31, 56–77.
- Steel, R. P., & Rentsch, J. R. (1997). The dispositional model of job attitudes revisited: Findings of a 10-year study. *Journal of Applied Psychology*, 82, 873–879.

- Stewart, G. L. (1996). Reward structure as a moderator of the relationship between extraversion and sales performance. *Journal of Applied Psychology*, 81, 619–627.
- Tellegen, A. (1985). Structures of mood and personality and their relevance to assessing anxiety, with an emphasis on self-report. In A. H. Tuma & J. D. Maser (Eds.), *Anxiety and the anxiety disorders* (pp. 681–706). Hillsdale, NJ: Erlbaum.
- Tellegen, A., Watson, D., & Clark, L. A. (1999). On the dimensional and hierarchical structure of affect. *Psychological Science*, 10, 297–303.
- Thayer, R. E. (1996). *The origin of everyday moods: Managing energy, tension, and stress*. New York: Oxford Univ. Press.
- Tomarken, A. J., Davidson, R. J., & Henriques, J. B. (1990). Resting frontal brain asymmetry predicts affective responses to films. *Journal of Personality and Social Psychology*, 59, 791–801.
- Tupes, E. C., & Christal, R. E. (1961). *Recurrent personality factors based on trait ratings*. United States Air Force Aeronautical Systems Division Technical Report, No. 61–97.
- Warr, P. (1999). Well-being in the workplace. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 392–412). New York: Russell Sage Foundation.
- Watson, D. (2000). *Mood and temperament*. New York: Guilford.
- Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, 96, 465–490.
- Watson, D., & Slack, A. K. (1993). General factors of affective temperament and their relation to job satisfaction over time. *Organizational Behavior and Human Decision Processes*, 54, 181–202.
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS Scales. *Journal of Personality and Social Psychology*, 54, 1063–1070.
- Weiss, H. M., & Adler, S. (1984). Personality and organizational behavior. *Research in Organizational Behavior*, 6, 1–50.
- 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.
- Weiss, H. M., Nicholas, J. P., & Daus, C. S. (1999). An examination of the joint effects of affective experiences and job beliefs on job satisfaction and variations in affective experiences over time. *Organizational Behavior and Human Decision Processes*, 78, 1–24.
- Weitz, J. (1952). A neglected concept in the study of job satisfaction. *Personnel Psychology*, 5, 201–205.
- Wiggins, J. S. (Ed). (1996). *The five-factor model of personality: Theoretical perspectives*. New York: Guilford Press.
- Yik, M. S. M., Russell, J. A., & Barrett, L. F. (1999). Structure of self-reported current affect: Integration and beyond. *Journal of Personality and Social Psychology*, 77, 600–619.
- Zelenski, J. M., & Larsen, R. J. (1999). Susceptibility to affect: A comparison of three personality taxonomies. *Journal of Personality*, 67, 761–791.
- Zelenski, J. M., & Larsen, R. J. (2000). The distribution of basic emotions in everyday life: A state and trait perspective from Experience Sampling data. *Journal of Research in Personality*, 34, 178–197.

Received June 15, 2001