CHAPTER 14

Job Attitudes: Cognition and Affect

REESHAD S. DALAL

> However powerful our technology and complex our corporations, the most remarkable feature of the modern working world may in the end be internal, consisting in an aspect of our mentalities: in the widely held belief that our work should make us happy.
>
> —(de Botton, 2009a, p. 106)

The expression "You are what you do" could not have been more fitting for our ancestors, who frequently took their names from hereditary occupations: Archer, Brewer, Butcher, Dalal, Daruwala, Gandhi, Guerrero, Jagger, Judge, Kuznetsov(a), Mason, Miner, Naylor, Porter, Schneider, Skinner, Smith/Schmidt/Schmitt, Sodawaterbottleopenerwala, Tinker, and Zapatero, to name but a few (Hulin, 2002). The connection between work and identity today may not be quite so literal, but it is no less consequential. After accounting for time spent sleeping and eating, most adults spend the majority of each weekday working. A satisfying job can provide meaning to life and be a source of self-worth; a dissatisfying job can be intolerable and a source of sleepless nights. Oral histories (e.g., *Working;* Terkel, 1974), ruminative essays (e.g., *The Pleasures and Sorrows of Work;* de Botton, 2009a), novels (e.g., *The Remains of the Day;* Ishiguro, 1988), plays (e.g., *Death of a Salesman;* Miller, 1949), and poems (e.g., *Mowing;* Frost, 2002), among others, provide eloquent illustrations of the impact of work on human existence and dignity. Although it seems quite possible for people to get through life without forming attitudes about Justin Bieber, the town of Alice Springs, the *Mona Lisa,* Crocs™ Clogs, dim sum, blood donation, a university's honor code, or tax cuts for the wealthy, it seems inconceivable that people will not form strong and readily accessible attitudes about their jobs. Job attitudes, in other words, may be among the most important attitudes people ever hold.

An attitude is a "summary evaluation of a psychological object captured in such attribute dimensions as good–bad, harmful–beneficial, pleasant–unpleasant, and likable–dislikable" (Ajzen, 2001, p. 28). As suggested in the previous paragraph, the object in question could be just about anything or anyone. In the present chapter, I focus on the job as the object of the attitude. The "summary evaluation" typically combines cognition (i.e., what one thinks about the attitude object) and affect (i.e., how one feels about the attitude object). For example, an attitude toward a coworker might be determined jointly by cognitive evaluations such as "Humphrey is unable to perform even the simplest tasks well" and affective responses such as "I hate Humphrey." Of course, cognition cannot be divorced completely from affect (Adolphs & Damasio, 2001). Nonetheless, the conceptual distinction between the two is useful.

The classical view of attitudes (e.g., Thurstone, 1928) additionally includes behavior (i.e., overt action) as a component of attitude. Although this tripartite view of attitudes is commonplace, the inclusion of behavior in the very definition of attitudes is quite problematic (Chaiken & Stangor, 1987; Dalal & Credé, in press; Wyer, 1974). If behavior is conceptualized as a *component* of attitudes, it cannot simultaneously be conceptualized as a

Author Note: I am grateful to Chuck Hulin for his feedback on an earlier version of this chapter.

Handbook of Psychology, Second Edition, edited by Irving B. Weiner.

consequence (or, for that matter, a *cause*) of attitudes. Due to the abiding interest in attitude–behavior relationships in social psychology (e.g., Ajzen, 2001) and in organizational psychology (e.g., Judge, Thoresen, Bono, & Patton, 2001), it is imprudent to conflate attitudes and behavior. Accordingly, the view of attitudes espoused in the current chapter includes only cognition and affect, with behavior instead being treated as a correlate (e.g., a consequence or a cause).

Several job attitudes have been proposed. Of these, one particular job attitude, job satisfaction, has been studied very heavily—a Google Scholar search in April 2011 yielded an astonishing 521,000 hits for "job satisfaction"—in fact, several times more heavily than all the other job attitudes put together. The vast majority of what organizational psychologists know about job attitudes is therefore attributable to the study of job satisfaction. In addition, as I discuss in a subsequent section: (a) some of the other job attitudes (e.g., employee engagement) are bedeviled by conceptual and measurement-related problems, and (b) the various job attitudes are quite strongly interrelated. For all these reasons, this chapter is devoted primarily to job satisfaction. In keeping with the previous discussion of attitudes, I offer the following definition: *job satisfaction is a set of cognitive and affective responses to the job situation*.

The inclusion of affect in the definition of job satisfaction is consistent not only with the classical view of attitudes (e.g., Thurstone, 1928) but also with most previous definitions of job satisfaction (e.g., Cranny, Smith, & Stone, 1992; Locke, 1976; P. C. Smith, Kendall, & Hulin, 1969). Yet, these previous definitions notwithstanding, a funny thing happened on the way to studying job satisfaction. In practice, affective reactions to the job were given short shrift; the study of job satisfaction was reduced to the study of cognitive evaluations of the job (H. M. Weiss, 2002). This reductionist tendency may have been a consequence of the "cognitive revolution" that was then engulfing the discipline of psychology (see Baars, 1986). Regardless of the reasons for its banishment from polite society, affect has gradually regained an eminent position in psychology as a whole and organizational psychology in particular (Barsade, Brief, & Spataro, 2003; H. M. Weiss & Cropanzano, 1996). It may not be premature to talk about an "affective revolution" (Barsade et al., 2003), albeit one that seeks not to deprecate cognition but rather to elevate affect to equal status.

Consequently, in this chapter, I devote considerable attention to the affective component of job satisfaction. I discuss traditional theories of the antecedents and consequences of job satisfaction, which accentuate cognition, but I also discuss newer theories, some of which (e.g., Affective Events Theory; H. M. Weiss & Cropanzano, 1996) accentuate affect as well. I furthermore discuss traditional approaches to measuring job satisfaction (e.g., the Job Descriptive Index; P. C. Smith et al., 1969), which accentuate cognition, but I also discuss the measurement of affect. Finally, I discuss new directions in the study of the cognitive and affective components of job satisfaction. First, however, I discuss the levels of generality at which job satisfaction has been conceptualized.

THE FACET VERSUS GLOBAL APPROACHES TO JOB SATISFACTION

Many of the well-known measures of job satisfaction involve evaluations of various facets (aspects) of the job: for example, satisfaction with the supervisor, coworkers, amount of pay and benefits, opportunities for promotion, and nature of the work itself. The reason for doing so, of course, is that an employee may be satisfied with certain areas of the job while being dissatisfied with others. This, however, raises the question of how the overall job satisfaction of an employee should be computed.

"Sum of Facets" Versus "Global" Job Satisfaction

Often, researchers have viewed overall job satisfaction as the sum (or average) of facet satisfaction scores. This, however, is an undesirable practice from a conceptual standpoint, because it involves several related assumptions, none of which is likely to be tenable (Balzer et al., 2000; Ironson, Smith, Brannick, Gibson, & Paul, 1989; Scarpello & Campbell, 1983).

The first untenable assumption is that all facets relevant to every employee's job are measured and that no facet irrelevant to any employee's job is measured—in other words, that there are no errors of omission and commission, respectively. The second untenable assumption is that facets combine in a linear, additive fashion in determining overall job satisfaction. On the contrary, it is quite possible that some facets have nonlinear effects, that the impact of a particular facet depends on the level of another facet (i.e., that facets may interact with each other), and so forth (Balzer et al., 2000). The third untenable assumption is that the various facets should be weighted equally in determining overall job satisfaction. I discuss this issue in greater detail subsequently, in the section on the relative importance of facets in determining global job

satisfaction. For the moment, suffice it to say that a unit-weighting approach, such as the sum of facets approach, is obviously inadequate if respondents find certain facets of the job to be much more important than other facets.

For all these reasons, overall job satisfaction is best assessed not as a sum of facet satisfactions but rather by directly measuring "global" job satisfaction—that is, by asking an employee to describe his or her job *as a whole*. As an example, the Job in General scale, a measure of global job satisfaction, frequently accompanies the Job Descriptive Index, which measures facet-level satisfaction (Balzer et al., 2000).

Global Versus Facet-Level Satisfaction: Which Is Better?

Although global measures of job satisfaction often accompany facet measures, a question arises as to when global versus facet measures should be used in the prediction of work behavior. Research in social psychology (e.g., Ajzen, 2005) and industrial–organizational psychology (e.g., Lavelle, Rupp, & Brockner, 2007) suggests that attitudes predict behavior best when the attitude and behavior are at the same level of generality (i.e., granularity) and when they are directed toward the same object (i.e., target). Thus, for example, employees' deviant behavior directed toward their *supervisor* should be better predicted by their satisfaction with the *supervisor,* whereas employees' *overall* deviant behavior should be better predicted by their *overall* (i.e., global) job satisfaction. Neither global nor facet measures of satisfaction, in other words, are inherently "better." Both types of measures are necessary for a complete understanding of employees' responses to the job situation.

Relative Importance of Facets in Determining Global Satisfaction

Previously, I mentioned that one of the reasons that overall job satisfaction should be measured using global measures of satisfaction rather than a simple sum of facets approach is that the facets are not equally important in determining overall job satisfaction. If that is the case, which facet of satisfaction is the most important in determining overall satisfaction? This is a question that has preoccupied job satisfaction researchers for over 60 years (Ironson et al., 1989). The answer, based on "[r]esearch studies across many years, organizations, and types of jobs," appears to be: the nature of the work itself (Saari & Judge, 2004, p. 397).

For example, Ironson et al. (1989) examined five measures of global job satisfaction as well as their relationships with measures of satisfaction with five facets of the job (pay, promotions, coworkers, the supervisor, and the nature of the work itself). For all five measures of global job satisfaction, *by far* the strongest facet determinant was satisfaction with the nature of the work itself. By contrast, satisfaction with pay was the weakest determinant of global job satisfaction for four of the five global measures (and the second-weakest determinant for the fifth global measure).

How Important Is Pay?

The aforementioned results from Ironson et al. (1989) appear to suggest that pay is not particularly important in determining global job satisfaction. In further support of this conclusion, a recent meta-analysis (Judge, Piccolo, Podsakoff, Shaw, & Rich, 2010) demonstrated that (a) compared to samples of participants earning lower average levels of pay, those earning higher average levels of pay did not exhibit higher average levels of job satisfaction; and (b) even after correcting for unreliability in measures of job satisfaction, the average within-sample correlation between pay level and job satisfaction was only 0.15.

Nonetheless, it is worth noting that the relative importance of pay (like any other facet) vis-à-vis overall job satisfaction is dependent on several factors. For example, the importance of pay is frequently assessed *relative* to that of other facets. Thus, pay may appear to be more or less important, depending on the other facets included in the analysis. Findings therefore cannot easily be compared across studies containing different combinations of facets.

The manner in which relative importance is determined can also influence the apparent importance of pay (Rynes, Gerhart, & Minette, 2004). For example, Jurgensen (1978) asked respondents to assess the relative importance of ten facets by ranking them on the basis of what was most important to (a) the respondents themselves, and (b) people "just like" the respondents (e.g., same demographic profile). Pay appeared to be relatively unimportant in the first approach but the most important facet in the second approach. The reader is cautioned that it is unclear precisely what is being measured via the second approach—or indeed why the results from the second approach should be viewed as the gospel truth. This caveat aside, at least some portion of the difference in results is probably due to the fact that, when describing themselves,

people are reluctant to rank pay highly because this would be a socially undesirable response (Rynes et al., 2004). In support of this contention is the finding that—compared to when respondents are asked to rank how important various facets are to them—pay appears to be considerably more important when respondents' judgment "policies" are "captured" indirectly, by having them evaluate a series of hypothetical job descriptions across which the levels of various facets (e.g., the amount of pay) are systematically manipulated (Feldman & Arnold, 1978).

The importance of pay also differs as a function of the specific criterion variable in question, as well as various situational and individual difference factors (Rynes et al., 2004). Pay is more important for organizational recruitment/attraction than for organizational retention, job performance, or job satisfaction. At the recruitment stage, pay is one of the few things the applicant knows about the job. Posthire, however, other factors (e.g., nature of the work itself, quality of supervision) become more apparent, reducing the importance of pay. Pay is also more important when (a) pay is performance based than when it is not, (b) the variance in pay across employees is large than when it is small, (c) pay is below average than when it is above average (i.e., the effect of pay is nonlinear, with diminishing marginal utility),[1] and (d) changes have been made to the pay system (especially negative changes, such as pay cuts, and especially when such changes have been made without adequate explanation) than when no changes have been made. Finally, performance-based pay in particular is more important to (a) high performers than low performers, (b) high academic achievers than low academic achievers, (c) employees with a high rather than low need for achievement, and (d) employees with high rather than low self-efficacy.

ANTECEDENTS TO JOB SATISFACTION

Cornell Model

The Cornell Model of job attitudes (Hulin, 1991; P. C. Smith et al., 1969) was the theoretical foundation for a series of well-received studies on job attitudes. Among the products of these resultant studies is the Job Descriptive Index (JDI), the most widely used scientific (i.e., valid) measure of job satisfaction (Balzer et al., 2000; Judge et al., 2001). A modified version of the Cornell Model is depicted in Figure 14.1.[2]

The model, like the well-known equity theory of motivation (Adams, 1965) and March and Simon's (1958) economic model of job attitudes, emphasizes the importance of work-role inputs and outcomes. Inputs include such things as skills, training, time, effort, and forgone opportunities. Outcomes include such things as pay and benefits, status, and working conditions. The major contribution of the Cornell Model, however, comes from its prediction that the impact of both inputs and outcomes on job satisfaction is dependent on the employee's frames of reference (see also March & Simon, 1958). Frames of reference, in turn, are posited to be heavily influenced by economic factors such as the local unemployment rate, the occupation-specific unemployment rate, and, most proximally, the number and nature of job opportunities available to the employee in question. For example, on the input side, working 50 hours a week is likely to seem more satisfying if one's peers are working 60 hours a week than if they are working 40 hours a week. Similarly, on the outcome side, an annual salary of $80,000 is likely to suddenly seem less satisfying when one is offered a job with a salary of $90,000. The Cornell Model is therefore able to account for the possibility that two individuals who possess objectively identical jobs may nonetheless experience very different levels of job satisfaction, whereas two individuals who possess jobs that differ greatly in terms of objective working conditions may nonetheless experience identical levels of job satisfaction. There can be extraordinarily satisfied sanitation consultants and soul-crushingly dissatisfied senior executives—and the theory

[1]This finding is consistent with research conducted by economists, which suggests that a change in happiness is proportional to a *percentage* change in income, such that the amount of incremental happiness "bought" by an extra $1 decreases with increasing income (Stevenson & Wolfers, 2008).

[2]In the interest of simplicity, I have taken the liberty of making certain terminological modifications. Research on the Cornell Model sometimes refers to work-role "contributions" or "costs," and sometimes to work-role "inputs" (i.e., these terms appear to be used more or less interchangeably). The present chapter uses the term "inputs" in order to enhance the parallelism with work-role outcomes (the other major category of antecedents in the Cornell Model), as well as with the well-known equity theory of motivation (Adams, 1965), which emphasizes both inputs and outcomes. In addition, the original Cornell model used the term "frames of reference" for outcomes and the term "utilities" for inputs. However, there appears to be little substantive difference between these two constructs. Therefore, for reasons of parsimony, I use the term "frames of reference" vis-à-vis both outcomes and inputs. Needless to say, some frames of reference may apply solely to outcomes, others solely to inputs, and yet others to both outcomes and inputs.

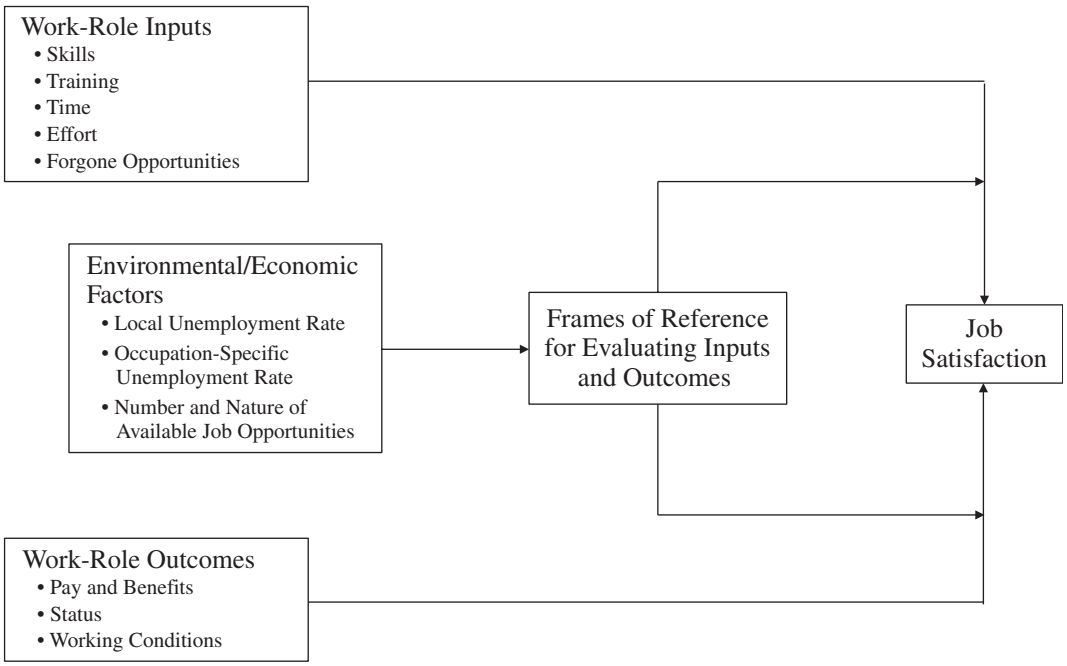


Figure 14.1 The Cornell Model of job satisfaction

Adapted from "Alternative opportunities and withdrawal decisions: Empirical and theoretical discrepancies and an integration," by C. L. Hulin, M. Roznowski, and D. Hachiya, (1985), *Psychological Bulletin, 97,* p. 246.
Copyright 1985 by the American Psychological Association.

was developed in an attempt to explain these purported anomalies.

In this regard, findings by Hulin (1966) are informative. Hulin studied 1,950 employees employed by the same organization, doing the same work, at the same wage rates, but living in 300 different communities. Hulin observed consistent negative correlations between economic conditions in communities and job attitudes (see also Kendall, 1963), and positive correlations between percentage of substandard housing and job attitudes. The prosperity of the community and the prevalence of slums in the community appeared to influence employees' frames of reference—and, consequently, their job satisfaction.

Comparison-Level Model

Thibaut and Kelley's (1959) comparison-level model was not originally intended to apply to job satisfaction, but can easily be adapted for this purpose. According to the (adapted) model, previous jobs serve as the comparison level (CL) for the current job. Jobs that provide outcomes worse than the CL are dissatisfying, whereas those that provide outcomes better than the CL are satisfying. For example, an employee will be dissatisfied if he or she is allowed less autonomy at the current job than at previous jobs. The theory also contains a second comparison level, which will be discussed subsequently, in the section on the consequences of job satisfaction.

Value-Percept Model

According to Locke's (1976) value-percept model, job satisfaction results from the attainment of important—that is, valued—job facets (characteristics). Specifically:

$$\text{Satisfaction with a job facet} = (\text{Want} - \text{Have}) \times \text{Importance}$$

where *Want* is the desired (or wanted) amount of a particular job facet, *Have* is the amount of that job facet that the employee perceives he or she currently has (i.e., the amount the job is currently perceived to supply), and *Importance* is the importance (or value) of that job facet to the employee. According to Locke, a discrepancy between what is desired by the employee and what is supplied by the job results in more dissatisfaction for important than unimportant job facets.

Because individuals consider multiple job facets when evaluating their job satisfaction, the cognitive calculus is repeated for each job facet. Overall or global satisfaction

is then estimated by aggregating across all job characteristics, weighting (once again) by their importance to the individual. Specifically:

Overall job satisfaction
= (Satisfaction with facet #1 × Importance of facet #1)
+ (Satisfaction with facet #2 × Importance of facet #2)
+ ⋯ + (Satisfaction with facet #*n*
× Importance of facet #*n*)

The value-percept model assumes considerable individual differences in importance weights. Yet, it is not entirely clear whether such large individual differences actually exist. It may be the case that some job characteristics are almost universally valued over others.

Further, in evaluating the value-percept model, it is useful to examine the conclusions from extant research assessing the efficacy of differential-weighting approaches (e.g., Aiken, 1966; Ree, Carretta, & Earles, 1998; Wainer, 1976, 1978). As long as the variables being combined are correlated and the range of the weights across the variables being combined is low, a differentially weighted composite is unlikely to yield considerable improvement over a unit-weighted (i.e., equally weighted) composite: in the words of Wainer (1976), "It don't make no nevermind." Therefore, notwithstanding the theoretical information contained in the importance weights, empirical gains from weighting the discrepancies by importance may not be realized (Mikes & Hulin, 1968).

Despite these psychometric considerations, Rice, Gentile, and McFarlin (1991) found that facet importance moderated the relationships between facet amount and facet satisfaction. However, Rice et al. also found that facet importance did *not* moderate the relationship between facet satisfaction and overall job satisfaction. A unit-weighted composite of facet satisfaction scores may do a good job of predicting overall satisfaction because facet importance (intensity) is *already reflected* in the facet satisfaction score (extensity). In other words, weighting by importance *once again* may not be necessary.

Person–Environment Fit Model

A theoretical model that is conceptually very similar to the value-percept model is the person–environment fit model. According to this model, a discrepancy between what the employee needs/wants and what the job is able to supply (e.g., the employee may need more resources than the organization is able to supply), or between what the job requires and what the employee is capable of providing (e.g., the job may require that the employee put in more hours of work per week than the employee is able to put in), is associated with deleterious consequences such as job dissatisfaction (Kristof, 1996; Kristof-Brown, Zimmerman, & Johnson, 2005). Some formulations are even more similar to the value-percept model in that they additionally include importance weighting, such that discrepancies on important (as adjudged by the employee) dimensions are viewed as more harmful than those on unimportant dimensions (Edwards, 1991).

It should be noted that traditional approaches to studying person–environment fit (i.e., direct fit assessments, difference scores, and profile correlations) have considerable limitations (see Edwards, 2002). The "person" and "environment" components should be measured separately, and their effects on the outcome (e.g., job satisfaction) should be assessed via polynomial regression and response surface analysis (Edwards, 2002; Shanock, Baran, Gentry, Pattison, & Heggestad, 2010). When this is done, several interesting findings emerge (Kristof-Brown & Guay, 2011; Yang, Levine, Smith, Ispas, & Rossi, 2008). First, for some outcomes, the idea of person–environment "fit" seems not to matter; rather, it is simply the main effects of person and environment that matter. Interestingly, job satisfaction is one of the outcomes for which "fit" does seem to matter. Second, compared to the person, the environment tends to have a more important impact on outcomes. For example, job satisfaction may be determined more strongly by actual than desired pay. Third, when fit does matter, the impact of misfit on outcomes may be asynchronous. For example, compared to excess supplies of resources from the job, inadequate supplies are likely to have more deleterious effects on job satisfaction. Fourth, the impact of fit on outcomes may be non-uniform. For example, job satisfaction is likely to be higher when both the person's needs and the environment's supplies are high than when both are low. These results suggest that it may be an understatement to conclude that the impact of person–environment fit on job satisfaction is rather complex.

Job Characteristics Model

According to the job characteristics model (JCM; Hackman & Oldham, 1976), certain jobs are more motivating and satisfying than others—and existing jobs can be redesigned to increase motivation and satisfaction. In general, outcomes such as motivation and satisfaction at work

are argued to depend on the following five job characteristics:

1. *Skill variety*: The degree to which the work tasks allow employees to use a variety of skills and abilities.
2. *Task identity*: The degree to which the work entails the completion of an entire product or service (i.e., the degree to which the work is self-contained).
3. *Task significance*: The degree to which the employee's work is seen as important by other people inside and outside the organization.
4. *Autonomy*: The degree to which the employee has control over how and when to accomplish work tasks.
5. *Feedback*: The degree to which the work itself (as opposed to the supervisor) provides information pertaining to how well the employee is performing.

These job characteristics are posited to influence motivation and satisfaction through various psychological states. Skill variety, task identity, and task significance are all posited to lead to the psychological state of meaningfulness of work. Autonomy is posited to lead to the psychological state of responsibility for work outcomes. Feedback is posited to lead to the psychological state of knowledge of results of work activities. Overall, according to Hackman and Oldham (1980), the "Motivating Potential Score" can be calculated from the five job characteristics as follows:

$$\text{Motivating Potential Score} = \frac{(\text{Skill Variety} + \text{Task Identity} + \text{Task Significance})}{3} \times \text{Autonomy} \times \text{Feedback}$$

Jobs with higher Motivating Potential Scores are likely to yield higher motivation and satisfaction than those with lower Motivating Potential Scores.

The model also includes an individual differences variable, Growth Need Strength (GNS). GNS is defined as an employee's desire for personal growth and development, especially as it applies to work (Hackman & Oldham, 1976). High-GNS employees want their work to contribute to their personal growth; low-GNS employees do not. The impact of job characteristics on motivation and satisfaction is predicted to be higher for high-GNS than low-GNS employees.

How have all these predictions fared in empirical tests? At a broad level, it is important to recognize that the five job characteristics are actually characteristics of one particular aspect of the job: the nature of the work itself. As discussed previously, the nature of the work itself is generally believed to be the most important determinant of job satisfaction. This suggests that, broadly speaking, Hackman and Oldham (1976) were wise to focus the JCM on characteristics of the work itself.

Empirical research has, however, been less kind to the aforementioned formula for calculating the overall Motivating Potential Score of a job. Outcomes like motivation and satisfaction appear to be better predicted by a simple additive (unit-weighted) combination of the five job characteristics than by the differentially weighted combination proposed as part of the JCM (Fried & Ferris, 1987). This does not, of course, invalidate the entire model. In support of the model, research suggests that the relationship between work characteristics and job satisfaction is stronger for high-GNS employees (average $r = 0.68$) than for low-GNS employees (average $r = 0.38$; Frye, 1996). However, construct validity questions about the GNS construct abound. Is GNS a function of personality traits (e.g., conscientiousness), values, cultural factors, and so forth? More clarity is needed regarding what the GNS construct actually measures. Finally, although the theory assumes that job characteristics are antecedents to satisfaction, it is possible that the relationship is in fact in the other direction—that is, from satisfaction to *perceptions* of job characteristics—or bidirectional (James & Jones, 1980; James & Tetrick, 1986).

Dispositional Basis for Job Satisfaction

Early research suggested a dispositional basis for job satisfaction. For instance, Hoppock (1935) found that emotional adjustment was higher among satisfied than dissatisfied employees. Yet, for the most part, job satisfaction was considered to be a "situational" construct: employees were believed to be dissatisfied with objectively bad jobs and satisfied with objectively good ones.

This uncomplicated worldview was upended by two provocative papers, both featuring Barry Staw. Staw and Ross (1985) observed that measures of job satisfaction exhibited unusual stability even when employees changed jobs and occupations. From this, they inferred that job satisfaction is, in part, dispositionally determined. The Staw and Ross paper was roundly criticized (e.g., Davis-Blake & Pfeffer, 1989) for attempting to establish a dispositional basis for job satisfaction without actually having measured dispositions. Indeed, the observed stability of job satisfaction could have been attributable to the fact that, even when people changed jobs and occupations, the psychological features of their job situation (e.g., the

job characteristics studied by Hackman & Oldham, 1976, 1980) may not have changed much. This important limitation was, however, rectified by Staw, Bell, and Clausen (1986), who showed that affective disposition, measured at ages 12–14, exhibited a moderate correlation ($r = 0.34$, $p < 0.05$) with job satisfaction measured at ages 54–62.

Further evidence of a dispositional basis for job satisfaction came from Arvey, Bouchard, Segal, and Abraham (1989). These authors found relatively similar levels of job satisfaction in monozygotic ("identical," in common parlance) twins reared apart, despite controlling statistically for age, sex, and occupational characteristics.[3] The authors concluded that approximately 30% of the variability in job satisfaction is attributable to a person's genes. Subsequent research (e.g., Arvey, McCall, Bouchard, Taubman, & Cavanaugh, 1994) has arrived at very similar estimates.

A question arises, however, as to the nature of the specific dispositional constructs that influence job satisfaction. Perhaps the most interesting (to this author, at least) area of research stems from the idea that certain people will tend to respond positively or negatively even to ostensibly neutral stimuli (e.g., 8 $^1/_2$″ × 11″ paper). This led to the development of Weitz's (1952) "gripe" scale, now known as the Neutral Objects Satisfaction Questionnaire (NOSQ; Judge & Bretz, 1993). Scores on the NOSQ are associated positively with scores on job satisfaction inventories (for a meta-analysis, see Eschleman & Bowling, in press), which suggests that a tendency to view a variety of neutral objects positively or negatively might indicate an affective disposition conducive to viewing life as a whole—and consequently the job as well—positively or negatively, irrespective of actual environmental conditions. Although this is an intriguing possibility, there are also important, and as yet unresolved, problems with this approach. Research on the NOSQ has not been particularly forthcoming regarding the specific nature of the *psychological construct* being measured by the NOSQ. Moreover, it turns out that the majority of items on the NOSQ are not particularly "neutral" in either a conceptual or an empirical sense (Eschleman & Bowling, in press). These may be serious limitations, but they do not invalidate the underlying idea that systematically extreme responses to relatively innocuous stimuli may connote an important dispositional tendency.

Other research has focused on more well-known dispositional taxonomies, including trait positive and negative affect (Watson & Slack, 1993) and the "Big Five" personality factors (Judge, Heller, & Mount, 2002). Ilies and Judge (2003) concluded that approximately 45% of the genetic variance in job satisfaction is attributable to trait affect, whereas approximately 24% is attributable to the Big Five personality factors—thereby suggesting that the dispositional basis for job satisfaction is more likely to be a function of affect than of personality.

Recently, Judge and colleagues (e.g., Judge & Bono, 2001; Judge, Locke, & Durham, 1997) have proposed another dispositional construct of potential relevance to job satisfaction: core self-evaluation (CSE). CSEs are believed to consist of a single, overarching trait composed of four narrower traits: self-esteem, generalized self-efficacy, neuroticism, and locus of control (Judge et al., 1997), though the inclusion of locus of control has subsequently been questioned (Bono & Judge, 2003). Judge and Bono (2001) concluded that a composite CSE trait correlates 0.37 with job satisfaction. This suggests that CSEs might be a useful dispositional predictor of job satisfaction. Yet, because CSE is a repackaging of existing dispositional constructs, rather than a collection of new ones, an unresolved question is whether this repackaging constitutes a meaningful advancement in the prediction of job satisfaction. Preliminary evidence suggests that CSEs in conjunction with trait negative affect—which is closely conceptually related to neuroticism (one of the components of CSEs)—are a particularly useful predictor of job satisfaction across studies (Judge, Heller, & Klinger, 2008). More research is needed, however.

Affective Events Theory

A feature of virtually all the previous theories is an overemphasis on the cognitive aspects of job satisfaction, and an underemphasis (or no emphasis) on the affective aspects. The study of job satisfaction, in other words, appeared to more or less have been reduced to the study of what people *think* at work, with little regard for how they *feel* (H. M. Weiss & Brief, 2001). In spite of the

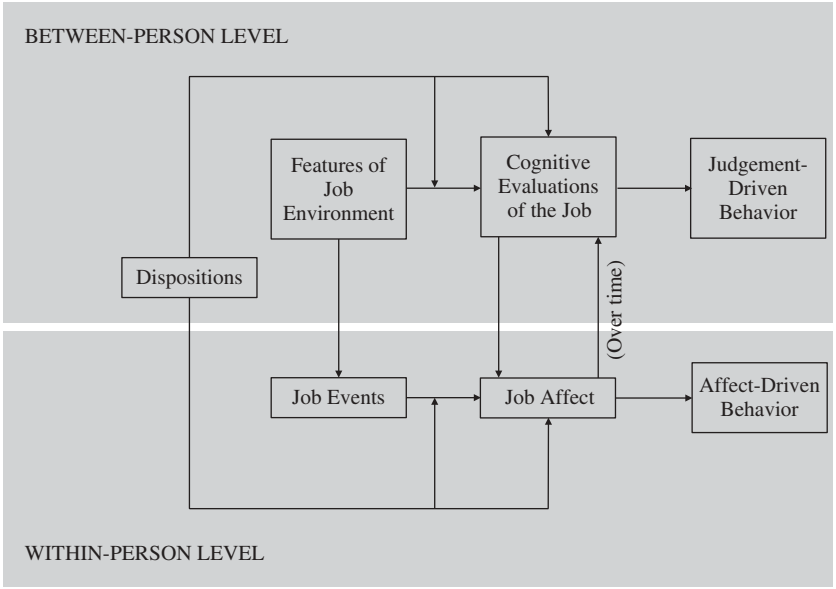
[3]Monozygotic twins share 100% of their genes in common. Moreover, when twins are reared apart, they are assumed to encounter very different environments. Thus, similarity of scores across twin pairs on the variable in question (here: job satisfaction) is assumed to be attributable solely to genes. Of course it is an over-simplification to assume that monozygotic twins reared apart share completely different environments. For example, these twins do share identical prenatal and perinatal environments. Moreover, adoption agencies may attempt to place monozygotic twins in relatively similar families. Postreunion interaction, too, may influence the twin similarity. Nonetheless, studies that have attempted to account for these shared environmental factors have reached similar conclusions (Bouchard, Lykken, McGue, Segal, & Tellegen, 1990).

fact that the cognitive component of job satisfaction has been shown to exhibit relationships with antecedents and consequences, the neglect of the affective component cannot be justified theoretically or empirically.

In an effort to rectify this imbalance, H. M. Weiss and Cropanzano (1996) proposed Affective Events Theory (AET). A pictorial representation of the theory is provided in Figure 14.2. Here, I focus only on the theory's conceptualization of job satisfaction and its antecedents. I briefly discuss the theory's conceptualization of behavioral outcomes at a later stage, in the section on the consequences of job satisfaction.

The core of the theory involves two parallel processes: a between-person one and a within-person one. At the between-person level, relatively stable features of the work environment (such as those described in the aforementioned Job Characteristics Model) influence cognitively driven evaluations of the job situation. Here, the focus is on comparisons *across* (i.e., *between*) people. In comparing Harry to Sally, for instance, we might find that Harry's job provides much less autonomy than Sally's—and that Harry's thoughts about his job are more negative than Sally's thoughts about hers. These are the types of comparisons we routinely make in data from employee surveys.

At the within-person level, in contrast, the work environment is conceptualized in terms of discrete and temporally bound events. For example, on a given day at work, Sally may experience the following events: she may accidentally spill coffee on her new suit, she may experience uncivil treatment by a coworker, she may receive an e-mail to say that a project deadline has been extended by a week, she may accidentally overwrite an important file on her computer, she may be complimented by her supervisor for a job well done, and she may receive a telephone call from the day-care center to inform her that her child is sick. Conceptualizing the environment via discrete events such as these "is a drastic departure from the science of psychology as it has been practiced" (Wheeler & Reis, 1991, p. 350). These events, which may be termed "daily hassles and uplifts" (Kanner, Coyne, Schaefer, & Lazarus, 1981), differ not only from the relatively stable work-environment features described above (although the work-environment features are predicted to influence the *distributions* of these quotidian events), but also from major life events such as the death of a spouse or winning the lottery. Although no well-accepted taxonomy of such events has thus far been developed, it seems reasonable to expect that the events will vary along several psychological dimensions: valence (positivity–negativity), unexpectedness, frequency, severity, duration, and so forth. Further, due to modern communication technologies, the occurrence of relevant events need not even be restricted to the employee's workplace: external events may be



What we would call "job satisfaction" is the combination of job affect and cognitive evaluations of the job. Adapted from "Affective events theory: A theoretical discussion of the structure, causes and consequences of affective experiences at work," by H. M. Weiss and R. Cropanzano, *Research in Organizational Behavior*, *19*, p. 12. Copyright 1996 by Elsevier.

Figure 14.2 Affective events theory

communicated to the employee while he or she is at work (as in the day-care example provided above).

These events are then posited to influence affect (mood and emotions) at work. Indeed, the events are argued to serve as stochastic shocks that disrupt baseline levels of affect. Our hypothetical employee, Sally, may have been in a good mood until a few minutes ago, when she accidentally spilled coffee on her suit. Thus, work events and affect are both believed to be highly volatile over time. In other words, here the comparison is *within* a given person over various occasions (e.g., how Sally felt an hour ago versus how she feels right now).[4] To assess these changes, we need experience-sampling methods, also known as ecological momentary assessments, wherein each participant is surveyed on multiple occasions: typically, several times a day for several weeks (Beal & Weiss, 2003; Hektner, Schmidt, & Csikszentmihalyi, 2007). Using such methods, Dalal, Lam, Weiss, Welch, and Hulin (2009) estimated that, of the total variance in mood, 58% to 64% was attributable to within-person sources, with the remaining variance being attributable to between-person sources. Several other authors have reached fairly similar conclusions (see, e.g., Miner, Glomb, & Hulin, 2005). This within-person variance, a majority of the overall variance, would be ignored or treated as error in research conducted solely at the between-person level.

The theory also allows a role for dispositions. Employees' baseline affective reactions—which provide the equilibrium that is disturbed by discrete workplace events—are argued to be a function of individual differences in, among other things, affect cycles. Most individuals, for example, exhibit a daily cycle in activation levels; however, within that cycle, the location of the peak level of activation distinguishes "morning people" from "evening people" (Credé & Dalal, 2002). Dispositions are also posited as moderators of event–affect relationships. Certain individuals may be more reactive than others to events. Finally, although the original formulation of AET (Weiss & Cropanzano, 1996) did not mention this—perhaps because of its emphasis on the within-person component of the theory—it seems reasonable to expect the theory to include two additional effects of dispositions: a main effect and an interactive effect (with features of the work environment) on cognitive evaluations.

To summarize, what is popularly known as "job satisfaction" consists, according to AET, not only of cognitive evaluations but also of affect. These two components of job satisfaction differ in their primary source of variance (between-person vs. within-person) and, consequently, in the research methods most appropriate for studying them (traditional surveys vs. experience-sampling methods). The theory does, however, allow for the influence of cognitive evaluations on affective reactions, and, when aggregated over time, of affective reactions on cognitive evaluations.

AET should be considered a simplifying heuristic rather than a perfect representation of reality. The distinction between cognition and affect at a neurological level is imperfect (Adolphs & Damasio, 2001), as is the decision in AET to identify affect as a within-person phenomenon and cognition as a between-person phenomenon. Nonetheless, the theory serves a critical role by reminding organizational psychologists of the importance of affect. The distinction between relatively stable cognitive evaluations and highly volatile affective reactions is also consistent with Kahneman's (1999; Kahneman & Krueger, 2006; Kahneman & Riis, 2005) distinction between "evaluated well-being" (or "remembered utility") and "experienced well-being" (or "instant utility"). According to Kahneman, what AET calls cognitive evaluations would have two antecedents: (a) a set of standards used by the person to evaluate his or her situation, and (b) subjective aggregations of momentary affect across the time interval. The former is consistent with the cognitively oriented theories of job satisfaction discussed previously. The latter is consistent with the idea, expressed in AET, that, over time, affective reactions influence cognitive evaluations.

Summary

With a few minor modifications, the Cornell Model (see Figure 14.1) continues to be an impressive depiction of the antecedents of cognitive job evaluations. Perhaps the major modification, in light of recent theoretical and empirical research, would be the addition of a category of dispositional antecedents (including trait affect, personality, core self-evaluations, and perhaps even biological factors) to employees' frames of reference. Other modifications might involve a broader view of frames of reference as well as an explicit incorporation, into the model, of a judgment of "fit" between the outcomes from the job and the standards that result from the frames of reference.

[4]In my experience as a journal reviewer, this levels-of-analysis aspect, though central to Affective Events Theory (AET), appears to have eluded many researchers. It seems all too common for journal submissions to use AET as theoretical "justification" for studies in which affect is assessed between, not within, persons. This represents a fundamental misreading of the theory.

However, the Cornell Model, like other traditional models of job satisfaction, accentuates cognitive, between-person factors at the expense of affective, within-person factors. This void is filled by Affective Events Theory (AET; see Figure 14.2). It should be noted that AET aims to complement, not supplant, previous theories: it continues to provide place for cognitive job evaluations (and, in general, the between-person level of analysis), but it also stakes out a major role for affective reactions (and, in general, the within-person level of analysis). In a subsequent section of the paper, I discuss the role AET seems likely to play in the development of a *within-person organizational psychology*.

Prior to ending the current section, I will confess to not having summarized every well-known theory of the antecedents of job satisfaction. For example, though Herzberg's (1967) Two-Factor Theory is among the best-known theories of job satisfaction, I do not review it here because the specific predictions of this theory are not supported by the available evidence (e.g., Hulin & Smith, 1967; Locke, 1969). Having said this, it seems only fair to also say that the fundamental idea behind Herzberg's theory—namely, that dissatisfaction is not merely the negative pole of satisfaction but is, instead, a distinct factor—would seem much less preposterous today, when a popular theory of affect involves two relatively distinct factors of positive and negative affect. This irony has not escaped other observers of the research literature (see Weiss & Cropanzano, 1996).

CONSEQUENCES OF JOB SATISFACTION

I begin this section with a discussion of the withdrawal model, which remains the dominant model of the consequences of job satisfaction. I cover objections to this model, as well as other models that seek to augment or qualify the predictions from this model. Finally, I review the relationship between job satisfaction and job performance.

Withdrawal Model

Hulin and colleagues (e.g., Hulin, 1991; Hanisch & Hulin, 1990, 1991) have argued that employees behave adaptively, such that they withdraw from (i.e., avoid) dissatisfying jobs and dissatisfying tasks within jobs. This withdrawal could be permanent (i.e., *job* withdrawal), consisting of voluntary turnover and other turnover-related behavior, such as sending out one's résumé to potential employers, or it could be temporary (i.e., *work* withdrawal), consisting of behavior such as late arrival to work, early departure from work, extra and/or extra-long breaks at work, and voluntary absenteeism (Hanisch & Hulin, 1990, 1991). The withdrawal model remains the dominant model to explain such behavior, and this is especially so for turnover (Johns, 2001). It has, however, been criticized on several grounds, some more compelling than others.

One criticism (Harrison, 2002; Johns, 2001) pertains to common definitions of withdrawal (e.g., Hanisch & Hulin, 1991), which specify that withdrawal is a *response to (dis)satisfaction*. Yoking withdrawal so tightly to job satisfaction may suggest that (a) there is no need for empirical examinations of the satisfaction–withdrawal relationship because the two constructs are related *by definition,* and (b) job satisfaction is a necessary and sufficient cause of withdrawal, and no other constructs should be studied as causes of withdrawal. To be clear, these conclusions have never actually been advocated by proponents of the withdrawal model. Nonetheless, they are the unintended consequences of traditional definitions of withdrawal. Harrison (2002) has therefore suggested a reasonable-sounding redefinition of withdrawal. His definition eschews any mention of external constructs such as job satisfaction and instead emphasizes the withholding of work-role inputs on a temporary or permanent basis.

Another criticism of the withdrawal model is that the empirical relationships between job satisfaction and individual forms of withdrawal behavior—such as lateness, absenteeism, and turnover—are actually fairly weak (Harrison, 2002; Johns, 2001). Although this claim is true to its face, it is also largely beside the point (Hanisch, Hulin, & Roznowski, 1998). Individual forms of withdrawal behavior are *specific* constructs, which (as discussed previously) would not exhibit strong empirical relationships with a *general* construct like job satisfaction. In addition, individual forms of withdrawal behavior, and especially turnover, have extremely low base rates and severely skewed empirical distributions. Correcting for restriction of range increases the size of the correlations. Finally, although studying each of these forms of behavior individually may be of considerable practical relevance to organizations, it is not particularly useful from a *scientific* perspective if each behavior is an indicator of an underlying withdrawal construct. For all these reasons, proponents of the withdrawal model have repeatedly noted the need to examine relationships between satisfaction and a general withdrawal construct (or perhaps *two* withdrawal constructs, representing the aforementioned

distinction between *work* withdrawal and *job* withdrawal), not individual forms of withdrawal. Studies that have adopted this approach (see Hanisch et al., 1998, for a summary) have consistently yielded correlations in the moderate to high range, according to Cohen's (1977) rules of thumb.

Yet another criticism is that the withdrawal model has exercised a "closed shop," such that alternative theoretical approaches have not been permitted to flourish (Johns, 2001). This is an odd complaint: it seems to criticize the theory for being *too successful*. Nonetheless, what is certainly true is that alternative theoretical formulations should be encouraged and tested empirically against the withdrawal model. Some of these alternative formulations are intended to reduce the importance assigned to job satisfaction in the prediction of withdrawal (e.g., a social influence model of withdrawal that operates through demography, norms, climates, and social networks), whereas others are intended to reconceptualize withdrawal itself (e.g., a social exchange model that reconceptualizes withdrawal as just one form of an even broader construct of, say, equity-restoration within a social exchange framework; Johns, 2001).[5] Space constraints preclude the discussion of all these alternative formulations. However, in what follows, I discuss a few models that, though by no means directly contradictory to the withdrawal model, aim to qualify its predictions.

Affective Events Theory

Previously, I discussed the conceptualization of, and antecedents to, job satisfaction according to Affective Events Theory (Weiss & Cropanzano, 1996). Another prediction from the theory is that the two components of job satisfaction—cognitive evaluations and affect—lead to different sets of job behavior (see Figure 14.2). As is also true of the previously discussed aspects of the theory, the two sets of behavioral outcomes are fuzzy rather than crisp: the boundary between them is not absolute. Nonetheless, according to the theory, cognitive evaluations are more likely to result in *job* withdrawal (e.g., voluntary turnover, job search behavior) whereas job affect is more likely to result in *work* withdrawal (e.g., being late, leaving early, taking extra breaks).

[5]One presumes that this last suggestion would not be endorsed by those who advocate for a focus on individual forms of withdrawal. It may be difficult to *simultaneously* criticize the withdrawal construct for being too broad and too narrow.

Comparison Level Model

Previously, I discussed the portion of Thibaut and Kelley's (1959) comparison level model that pertained to satisfaction. However, in addition to the comparison level (CL) provided by an employee's previous jobs, there is a second comparison level. This is the comparison level for alternatives, CL_{ALT}, which refers to the outcomes one could receive from the best alternative job available to the person. At a conceptual level, CL_{ALT} may be thought of as the opportunity costs associated with the current job.

As discussed previously, according to the model, the juxtaposition of the current job with CL determines whether the employee is satisfied or dissatisfied with the current job. Similarly, the juxtaposition of the current job with CL_{ALT} determines whether the employee stays at the current job or quits. Of particular interest is the simultaneous comparison of the current job with previous jobs and available alternative jobs. When outcomes from the current job are inferior to those from not just previous jobs but also available job alternatives (i.e., Current $<$ CL and Current $<$ CL_{ALT}), the employee is likely to be dissatisfied and to quit his or her current job. Similarly, when outcomes from the current job are superior to those from not just previous jobs but also available job alternatives (i.e., Current $>$ CL and Current $>$ CL_{ALT}), the employee is likely to be satisfied and to stay. In these two cases, in other words, there is a perfect alignment between job dissatisfaction and turnover. The value of the model, however, stems from the two cases where dissatisfaction and turnover are not aligned. When outcomes from the current job are inferior to those from previous jobs (i.e., Current $<$ CL) but superior to those from available job alternatives (i.e., Current $>$ CL_{ALT}), the employee is likely to be dissatisfied but to nonetheless stay. Similarly, when outcomes from the current job are superior to those from previous jobs (i.e., Current $>$ CL) but inferior to those from available job alternatives (i.e., Current $<$ CL_{ALT}), the employee is likely to be satisfied but to nonetheless quit. In other words, job satisfaction does not always predict turnover.

The reader is nonetheless cautioned not to misinterpret the above discussion. Because the current job is a factor common to both these comparisons (i.e., with CL and CL_{ALT}), the comparisons are by no means orthogonal. A particularly hellish job is likely to lead to both dissatisfaction and turnover, whereas a particularly heavenly one is likely to lead to neither. Moreover, the available empirical evidence appears to suggest that it is not until

employees are dissatisfied and begin to have thoughts of quitting that they actively begin to pursue job alternatives (Hom, Caranikas-Walker, Prussia, & Griffeth, 1992). In other words, barring things like unsolicited job offers or non-work contingencies (e.g., relocating to be with a spouse), CL_{ALT} may not even be generated unless employees are already dissatisfied.

Unfolding Model

The unfolding model of turnover (e.g., Lee, Mitchell, Holtom, McDaniel, & Hill, 1999; Lee, Mitchell, Wise, & Fireman, 1996) makes at least two important contributions to the research literature. First, in addition to job (dis)satisfaction, the model includes several important antecedents to turnover. These are: (a) "shocks," which are major work and life events, such as an unsolicited job offer or a change in marital state,[6] (b) "scripts," which are preexisting plans of action, and (c) "image violations," which are instances of misfit between the values, goals, and goal-attainment strategies of the employee and those of the organization. In addition to these constructs, the model examines job search and job offers. Overall, then, the model suggests that no single construct—including job satisfaction—is *sufficient* to explain turnover.

The second contribution of the unfolding model is to recognize that turnover is the culmination of a dynamic process, and that the precise nature of this dynamic process can and does differ for various employees. Stated differently, there are likely to be multiple paths to turnover. These paths differ in terms of whether a given element of the model is a necessary precondition for turnover. For example, according to the model, neither searching for a job nor having job offers in hand is always necessary for turnover. Similarly, job dissatisfaction is not always considered *necessary* for turnover.

Yet, results from studies that have employed the unfolding model (Donnelly & Quirin, 2006; Holt, Rehg, Lin, & Miller, 2007; Lee et al., 1996, 1999; Morrell, Loan-Clarke, Arnold, & Wilkinson, 2008; Niederman, Sumner, & Maertz, 2007) indicate that job dissatisfaction typically *is,* in fact, a necessary condition for turnover. Across these studies, of the respondents who could be classified into one of the five paths articulated in the unfolding model (see Lee et al., 1996, 1999), on average 87% of respondents (range across studies = 67% − 100%) adopted paths that required prior job dissatisfaction.[7] In other words, these results indicate that, although job dissatisfaction is not sufficient to explain turnover, for the vast majority of employees it is a necessary precursor to turnover.

Relationship Between Job Satisfaction and Job Performance

The idea that job satisfaction leads to job performance—stated differently, that a happy employee is a productive employee—goes back at least as far as the famous Hawthorne studies (Roethlisberger & Dickson, 1939). Early organizational psychologists appear to have taken their cue from their counterparts in social psychology, where it was then "assumed that attitude was the key to understanding human behavior" (Ajzen & Fishbein, 2005, p. 174). Yet, as in social psychology (e.g., Ajzen, 2001; Ajzen & Fishbein, 2005), organizational psychology subsequently went through a period of time when attitude–behavior links were questioned (e.g., Brayfield & Crockett, 1955). Recently, however, a large meta-analysis by Judge et al. (2001) revealed a meaningful relationship between the two constructs. Judge et al. concluded that the constructs were correlated at 0.30 (or 0.25 when the unreliability in job performance ratings was corrected using an estimate of internal consistency rather than interrater reliability).

An important question regarding the satisfaction–performance relationship is the extent to which different relationships are likely to be found for different types of job performance. In particular, researchers have suggested that the "discretionary" or "voluntary" or "contextual"—as opposed to more narrowly task-oriented—aspects of job performance are driven less by abilities/skills and more by motivational processes (e.g., Borman & Motowidlo, 1997; C. A. Smith, Organ &

[6]These major life and work events should not be confused with the daily hassles and uplifts that are the focus of Affective Events Theory. Both are types of events, but the former are considerably more severe and considerably less frequent than the latter.

[7]This calculation excluded respondents who could not be classified into any path, as well as respondents who were classified into paths not originally specified by Lee et al. (1996, 1999) but rather delineated in an idiosyncratic manner by subsequent authors. (It should be noted that many respondents in these "newer" paths also exhibited job dissatisfaction.) For those respondents classified into one of the original 5 paths specified by Lee et al. (1996, 1999), the ratio—expressed as a percentage—of the number of respondents in paths requiring job dissatisfaction (i.e., Paths 3, 4a, and 4b) to the number of respondents in all 5 paths was calculated.

Near, 1983), which include job attitudes.[8] One might therefore predict that relationships between job satisfaction and "discretionary" forms of performance, such as organizational citizenship behavior and counterproductive work behavior, should be somewhat larger (in absolute value) than the relationship estimated by Judge et al. for overall job performance. Meta-analyses summarized by Dalal (2005) and Schleicher, Hansen, and Fox (2011) suggest some evidence of this vis-à-vis counterproductive work behavior (estimated meta-analytic correlations with job satisfaction range from −0.33 to −0.37), but little evidence vis-à-vis organizational citizenship behavior (estimated meta-analytic correlations with job satisfaction range from 0.16 to 0.28).

Another important question with regard to the satisfaction–performance relationship is the extent to which correlation implies causation. After all, as Judge et al. (2001) pointed out, the vast majority of the studies assessing the satisfaction–performance relationship have done so using cross-sectional studies. (In contrast, many studies of the satisfaction–withdrawal relationship have collected personnel data on lateness, absenteeism, and/or turnover, and have related these data to prior levels of job satisfaction.) In fact, a correlation between job satisfaction and job performance could be interpreted as satisfaction causing performance, performance causing satisfaction, a reciprocal relationship, or a spurious relationship. Judge et al. (2001) provide a particularly good discussion of these, and other, possibilities in the context of the satisfaction–performance relationship.

In the current venue, I will focus on only one alternative explanation: namely, that performance causes satisfaction. There is a substantial body of research in social psychology (see, e.g., Olson & Stone, 2005) suggesting that behavior influences future attitudes through psychological mechanisms like cognitive dissonance (Festinger, 1957; Festinger & Carlsmith, 1959) and/or self-perception (Bem, 1967). In organizational psychology as well, much research has argued that performance leads to satisfaction. The rationale is that high performance leads to rewards (both financial and nonfinancial), which in turn lead employees to be satisfied (Lawler & Porter, 1967; Locke & Latham, 2002).

What does the empirical research suggest in this regard? Riketta (2008) conducted a meta-analysis of panel studies that measured both job satisfaction and job performance on two (or more) occasions. He then examined the meta-analytic effect of (a) job satisfaction at Time 1 on job performance at Time 2 after controlling for job performance at Time 1, and (b) job performance at Time 1 on job satisfaction at Time 2 after controlling for job satisfaction at Time 1. Within the constraints of a nonexperimental research design, this was a particularly stringent test of causal direction. Riketta found that the lagged unique effect of job satisfaction on job performance, though very weak ($\beta = 0.03$), was nonetheless statistically significant (because of the high statistical power)—and was stronger than the (nonexistent and nonsignificant: $\beta = 0.00$) lagged unique effect of job performance on job satisfaction. The same basic pattern of relationships was observed when another job attitude (organizational commitment) was substituted for job satisfaction, as well as when organizational citizenship behavior was substituted for task performance. The results therefore suggest that job satisfaction is marginally more likely to lead to job performance than the converse.

Summary

A review of theoretical models suggests that job satisfaction is not sufficient to explain turnover, but that it is usually necessary. Empirical tests of the Unfolding Model (e.g., Lee et al., 1999) suggest that, in practice, few employees who quit can be classified into paths that do not require prior job dissatisfaction. Similarly, contrary to the Comparison Level Model (Thibaut & Kelley, 1959), meta-analytic path analysis (Hom et al., 1992) suggests that employees may not begin to actively pursue job alternatives unless they are already dissatisfied.

Further, although satisfaction–turnover relationships are not strong, the relationship is probably attenuated by a mismatch in predictor-criterion generality/specificity as well as the distributional properties of turnover (Hanisch et al., 1998), the latter of which may be responsible for

[8] From a theoretical perspective, the withholding of organizational citizenship behavior may be considered a form of withdrawal—indeed, a form of withdrawal that elicits fewer repercussions from the organization (Chen, Hui, & Sego, 1998). In addition, given that proponents of the withdrawal model (e.g., Hulin, 1991) discuss withdrawal as an *adaptive* response to dissatisfying work conditions, it is worth considering that adaptation could also encompass more "active" forms of negative behavior (Johns, 2001; Rosse & Hulin, 1985). In fact, *work* withdrawal (as opposed to *job* withdrawal), alongside more active negative behavior, composes counterproductive work behavior (Dalal, 2005; Spector, Fox, Penney, Bruursema, Goh, & Kessler, 2006). Thus, the adaptation process argued to undergird withdrawal can easily be extended to account for the prediction of citizenship and counterproductive behavior by job satisfaction.

the *generally weak* meta-analytic relationships between turnover and its putative antecedents (Griffeth, Hom, & Gaertner, 2000; see also Roznowski & Hulin, 1992). Empirical relationships between satisfaction and a broad withdrawal construct are robust (Hanisch et al., 1998), and meta-analytic path analysis suggests not only that satisfaction predicts turnover intentions but also that intentions mediate the satisfaction–turnover relationship (Tett & Meyer, 1993).

Meta-analytic results also suggest a meaningful relationship between job satisfaction and job performance (Judge et al., 2001), that satisfaction is marginally more likely to be an antecedent to performance than a consequence of performance (Riketta, 2008), and that satisfaction is slightly more strongly related to counterproductive work behavior than to overall job performance (Dalal, 2005). Finally, job satisfaction is likely to play an even more important role when its affective component is suitably incorporated (e.g., Weiss & Cropanzano, 1996). In sum, Roznowski and Hulin's (1992) assertion that job satisfaction is the single most important piece of posthire information about an employee still seems to hold true.

MEASURING JOB SATISFACTION

Most traditional measures of job satisfaction are tilted heavily toward cognitive evaluations of the job and away from affective reactions to the job (for a notable exception, see the "Faces" scale; Kunin, 1955; Dunham & Herman, 1975); I describe the measurement of these two components of job satisfaction separately. A much more extensive review of both cognitive and affective measures—including considerations related to "best practices" in attitude measurement (e.g., how many items should be used, whether reverse-scored items should be included)—is provided by Dalal and Credé (in press).

Cognitive Evaluations of the Job

To a great extent, the measurement of job satisfaction has relied on idiosyncratic homegrown inventories. I do not dwell on such measures except to say that their use in both academic and applied settings should be avoided because they are often poorly developed, validated, and normed.

The Job Descriptive Index (JDI; Balzer et al., 2000; P. C. Smith et al., 1969), the Minnesota Satisfaction Questionnaire (MSQ; D. J. Weiss, Dawis, England, & Lofquist, 1967), and the Index of Organizational Reactions (IOR; Dunham & Smith, 1979; Dunham, Smith, & Blackburn, 1977) are important departures from this tendency to use homegrown inventories purporting to measure job satisfaction. The JDI appears to be the most widely used measure of job satisfaction today (Balzer et al., 2000; Judge et al., 2001); the MSQ and IOR are also widely used.

These inventories converge dimensionally when they assess satisfaction with similar job characteristics (Dunham et al., 1977); moreover, they are related to appropriate individual differences and job characteristics, and have reasonable psychometric properties. The inventories, however, differ in their emphasis. The MSQ assesses the extent to which jobs fulfill "basic" needs. The IOR assesses satisfaction with eight facets of the job (work itself, the organization, pay, career future and security, etc.). The JDI assesses satisfaction with five facets of the job (work itself, pay, promotional opportunities and policies, supervision, and coworkers).

The popularity of the JDI may reflect the extensive psychometric research that accompanied its initial publication (P. C. Smith et al., 1969) and that has appeared in the more than four decades since then (e.g., Balzer et al., 2000; Hanisch, 1992; Roznowski, 1989). For example, the unusually careful attention devoted by the JDI's developers to item comprehensibility allows the JDI to be administered without modification to employees with less education and/or lower reading ability (Stone, Stone, & Gueutal, 1990). Furthermore, the JDI has been used in studies ranging from the effects of community characteristics on job satisfaction (Hulin, 1969; Kendall, 1963) to longitudinal studies of the effects of sexual harassment on job satisfaction and, ultimately, withdrawal (Glomb, Munson, Hulin, Bergman, & Drasgow, 1999). This database provides researchers with the evidence necessary to evaluate the JDI, including its relations with behavioral variables. If imitation is indeed the sincerest form of flattery, another indicator of the popularity of the JDI is that several "JDI-esque" (in terms of item structure, response structure, instructions, etc.) inventories have been developed to assess facets of the job not measured by the JDI: for example, satisfaction with job security (Probst, 2003) and satisfaction with management above the level of immediate supervision (Dalal, Bashshur, & Credé, 2011).

Researchers and practitioners who are interested in a single score representing overall job satisfaction, but who are aware of the previously discussed problems associated with the "sum of facets" approach, can use one of several "global" job satisfaction measures. The Job in General scale (Ironson et al., 1989), for example, is the global equivalent of the JDI.

Job Affect

Job affect (mood and emotions) presents a different set of conceptual and assessment problems. As described in Affective Events Theory (AET; Weiss & Cropanzano, 1996), job affect is influenced by events that occur on the job (e.g., finding out that a just-in-time delivery was not quite in time, winning the company lottery for a weekend at a spa) and by events that occur off the job but that nonetheless intrude into the job space (e.g., a telephone call from the child-care facility indicating that one's child is ill). Individual job events are likely to be difficult to predict. Yet they occur, and their occurrences often trigger affective reactions. Assessments of job affect, carried out in near real time, are necessary to tap into event–affect–behavior cycles and capitalize on the dynamic nature of affect.

The dynamic nature of job affect makes it difficult to use research practices that rely on one-shot, paper-and-pencil assessments of employees' attitudes. Instead, each employee should be surveyed on multiple occasions—perhaps several times per day for several weeks.[9] Traditionally, such "experience sampling" studies (otherwise known as "ecological momentary assessments") relied on beepers or pre-programmed wristwatch alarms to alert employees to complete surveys. These early studies had the virtue of simplicity, but they typically involved no checks on *when* employees completed the surveys. Newer approaches frequently involve the use of handheld computers or smartphones that can be carried by employees as they go about their quotidian tasks, and that combine the functions of alerting employees to take surveys, providing a medium for taking the surveys, recording when the surveys are taken, and storing the survey responses until they can be downloaded to a central database. The repeated surveying of an employee in experience-sampling methods allows for an emphasis on the *within*-person processes described in AET.

Several studies of affect that have used experience-sampling methods have found support for the hypothesized within-person variability of affect at work and its relationships with behavior as well as instigating events (Dalal et al., 2009; Glomb, Bhave, Miner, & Wall, 2011; Judge, Scott, & Ilies, 2006; Sonnentag & Ilies, 2011; Weiss, Nicholas, & Daus, 1999). It is not premature to conclude that experience sampling methods have become indispensible for the study of the affective component of job satisfaction. Beal and Weiss (2003) provide an overview of experience sampling methods and discuss how such methods can be used effectively in organizational research (see also Dalal et al., 2009, for a discussion of how existing measures can be adapted for experience sampling purposes). An even more detailed treatment is provided by Hektner et al. (2007).

Another issue that must be discussed is the structure of affect. In the remainder of this section, I discuss the structure of mood and then the structure of discrete emotions. The structure of mood is generally believed to reduce to two dimensions. However, there is great disagreement about the *content* of the two dimensions. According to one camp (Barrett & Russell, 1998), the dimensions are hedonic tone (pleasantness–unpleasantness) and activation (intensity). Each of these dimensions is conceptualized as being *bi*polar: the opposite of a pleasant mood is an unpleasant mood, and the opposite of an intense mood is a mild mood. Barrett and Russell (1998) provide several examples of mood scales that measure hedonic tone and activation. According to the second camp (Watson & Clark, 1999), the dimensions are positive affect and negative affect. Each of these dimensions is conceptualized as being *uni*polar: the opposite of a positive mood is not a negative mood but rather the absence of a positive mood, and the opposite of a negative mood is not a positive mood but rather the absence of a negative mood. Watson and Clark's (1999) PANAS-X is the best-known measure of positive and negative affect, and indeed the best-known measure of affect *per se*.

An extensive discussion of the merits and demerits of these competing structures is well beyond the scope of this chapter. However, I make three observations in passing. First, in organizational psychology, the structure involving positive and negative affect appears to be the more widely used. The reasons for this lopsidedness in usage patterns are not readily apparent: though both structures have their disadvantages, the disadvantages of the positive and negative affect structure appear to be more serious—especially at the within-person level (Weiss & Cropanzano, 1996). Second, the two structures are likely to be 45° spatial rotations of each other within the well-known "circumplex" model of affect (Tellegen, Watson, & Clark, 1999a). Thus, the differences between them may ultimately be more apparent than real. Third, Tellegen, Watson, and Clark (1999b) have proposed a resolution by contending that, at a higher level of abstraction, the positive affect and negative affect factors (and, in all likelihood, the hedonic tone and activation factors) are subsumed by a single, *bi*polar factor that these authors referred to as "global happiness-versus-unhappiness." Although this proposed resolution seems reasonable, it has not yet been widely accepted.

[9] In case the reader is wondering, these surveys are typically very short (e.g., 2–3 minutes long).

The structure of discrete emotions is similarly unclear. There have been numerous attempts to identify "basic" (i.e., primary) emotions, but findings have differed, in part due to a plethora of philosophical perspectives (e.g., evolutionary, physiological, and semantic perspectives). A review of extant taxonomies is provided by Weiss and Cropanzano (1996). Measures of discrete emotions are provided by, among others, Watson and Clark (1999) and Shaver, Schwartz, Kirson, and O'Connor (1987).

In sum, there is as yet little consensus regarding how either mood or discrete emotions should be measured. The potential contribution of affect to an understanding of job satisfaction (or anything else, for that matter) is unlikely to be fully realized until the structure of affect is resolved.

DIRECTIONS FOR FUTURE RESEARCH

In this section, I discuss four avenues for future research. The first two avenues pertain primarily to traditional, between-person, cognitive evaluations of the job. The third avenue is concerned with the measurement of job satisfaction and pertains to both cognition and affect. The fourth avenue is the least traditional and pertains primarily to job affect.

Unit-Level Job Satisfaction

Thus far, I have discussed job satisfaction at the conventional, between-person, level of analysis. In addition, I have discussed the affect component of job satisfaction at the within-person level of analysis. Recently, however, researchers have also been interested in job satisfaction at levels of analysis above the person, such as the organization, work-unit, or work-group levels. For reasons of parsimony, I subsequently refer to all these levels as the "unit" level. This should not be interpreted as meaning that the nomological network of job satisfaction cannot differ across, say, the organization versus work-group levels.

When studying the work unit, the researcher does not aim to anthropomorphize. Work units, as entities that are not alive, do not have thoughts or feelings. It is probably safe to assume that they are inherently neither satisfied nor dissatisfied. Rather, what is denoted as unit-level satisfaction is some aggregate of the satisfaction of employees within the unit.

Most research attention has been lavished on the mean within-unit satisfaction score, after ensuring low within-unit variability (i.e., high within-unit agreement or consensus). Indeed, sufficient studies have already accumulated for a meta-analysis of unit-level satisfaction–performance relationships to be conducted (Whitman, Van Rooy, & Viswesvaran, 2010). For the overall criterion of organizational performance, Whitman et al. found results very similar to those by Judge et al. (2001) at the individual level: the corrected unit-level correlation between unit satisfaction and overall unit performance was 0.34. When overall unit performance was decomposed into productivity, withdrawal, and customer satisfaction, corrected correlations with job satisfaction were in the 0.25–0.35 range (absolute values). Finally, the corrected unit-level correlation between satisfaction and organizational citizenship behavior was slightly higher (0.42).

The Whitman et al. (2010) meta-analysis does not indicate that research at this level of analysis is already a "closed shop." On the contrary, such research is in its early stages, and provides many opportunities for empirical and theoretical contributions. One such opportunity involves within-unit variability in job satisfaction, its antecedents, and its consequences. Future research should treat within-unit variability as important in its own right, rather than a mere statistical hurdle that must be cleared before the within-unit means can be calculated (see Chan, 1998). Whitman et al. made a start in this regard, by demonstrating that the relationship between unit satisfaction (operationalized as the mean within-unit score) and unit performance was higher when within-unit variability in satisfaction was low than when it was high (i.e., when within-unit agreement or consensus was high than when it was low). Yet, even this finding can ultimately be placed within a framework that attempts to predict *average levels* of within-unit performance. These are valuable findings. However, it is also worthwhile to conceptualize within-unit *variability* or *dispersion* in performance as an outcome variable. For example, why do customer satisfaction and absenteeism *vary* more within some units than others? When the emphasis is on within-unit variability in performance, within-unit variability in satisfaction may be a good predictor—conceivably, even a better one than average within-unit satisfaction.

Another area ripe for future research involves the antecedents of within-unit variability in satisfaction. Research on situational strength (Bowen & Ostroff, 2004; Meyer, Dalal, & Hermida, 2010) implicates Human Resource Management policies and practices as likely antecedents. Policies that are communicated or applied inconsistently across employees within the same unit may lead to high within-unit variability in employee satisfaction.

Satisfied or Engaged or Involved?

Perhaps because relationships between job satisfaction and job performance are often considered disappointingly small (though see Judge et al., 2001), organizational psychologists persist in their quest for The Great Attitudinal Hope: a job attitude that, when finally unearthed, will exhibit muscular relationships with job performance criteria without the need for heroic statistical corrections. Decrying this tendency, Roznowski and Hulin (1992) wrote: "Job satisfaction . . . has been around in scientific psychology for so long that it gets treated by some researchers as a comfortable 'old shoe,' one that is unfashionable and unworthy of continued research" (p. 124). Their admonition notwithstanding, the proliferation of job attitude constructs continues unabated.

Here, I discuss two such job attitudes. One of them, job involvement, has been around for a while; the other, employee engagement, is the newest pretender to the throne.[10] Job involvement is "the degree to which one is cognitively preoccupied with, *engaged* in, and concerned with one's present job" (Paullay, Alliger, & Stone-Romero, 1994, p. 225; emphasis added). Employee engagement "refers to the individual's *involvement* and *satisfaction* with as well as enthusiasm for work" (Harter, Schmidt, & Hayes, 2002, p. 269; emphasis added). Immediately, there is a problem. Job involvement and employee engagement are defined in terms of each other, and the latter is also defined in terms of job satisfaction (especially satisfaction with the nature of the work itself). Of course both job involvement and employee engagement have been defined in multiple ways by researchers. Nonetheless, the invocation of other job attitudes in construct definitions is disturbingly common in the case of employee engagement (Dalal, Baysinger, Brummel, & LeBreton, in press; Little & Little, 2006).

In an effort to break this definitional logjam, Macey and Schneider (2008) proposed that absorption or enthusiasm can be distinguished from mere satiation or contentment. They further proposed that job performance is driven by the former, not the latter. In a white paper, Schneider, Macey, Barbera, Young, and Lee (2006) used diagrams to illustrate this distinction in lushly evocative fashion: the engaged employee was depicted as climbing a mountain, whereas the satisfied employee was depicted as reclining in a chair with his or her feet up on a desk.

Although this proposed distinction is intuitively appealing, its utility is as yet unproven. In general, after correcting for measurement artifacts, the empirical relationships among the various job attitudes are quite strong (e.g., Harrison et al., 2006; Harter & Schmidt, 2008), suggesting the existence of a common higher order attitude factor. This suggests that employees may be unwilling or unable to make the fine-grained conceptual distinctions among these attitudes that are emphasized by researchers and practitioners. Thus, the lack of discriminant validity among the job attitudes is a major concern. This concern may be even more serious in the case of employee engagement. Not only are construct definitions of employee engagement frequently problematic, but inventories used to measure employee engagement frequently contain items very similar to those in inventories used to measure other job attitudes as well as trait positive affect. In this regard, Newman and Harrison (2008) provided no fewer than 17 examples of seemingly problematic items from employee engagement inventories. It is therefore perhaps not overly surprising that the unit-level correlation (corrected for artifacts) between employee engagement and job satisfaction, as reported by Harter et al. (2002), was 0.91.

A related concern regarding employee engagement is that its criterion-related validity, too, may be at least partly artifactual. This concern is motivated by another form of construct redundancy: the redundancy between employee engagement (the putative predictor variable) and job behavior/performance (the putative outcome variables).[11]

[10] I do not discuss another common attitude, organizational commitment. Conceptually, the target or referent of organizational commitment is the organization, whereas that of job satisfaction is the job. Thus, in theory, there is a clear distinction between organizational commitment and job satisfaction. However, as I discuss subsequently, relationships among the various job attitudes are quite high after accounting for measurement artifacts (e.g., Harrison Newman, & Roth, 2006). This may therefore be a distinction without a difference.

The target or referent of job involvement is also the job. For employee engagement, the target or referent is either the job or one particular facet thereof: the nature of the work itself. Therefore, unlike organizational commitment, there are conceptual reasons to expect job involvement and employee engagement to be related strongly to job satisfaction (and to expect employee engagement to be related particularly strongly to satisfaction with the work itself).

[11] It should be noted that concerns regarding predictor-criterion redundancy are not unique to employee engagement. For example, many items in popular organizational commitment inventories are clearly redundant with items in inventories measuring job withdrawal (i.e., turnover intentions or cognitions; Bozeman & Perrewé, 2001), thereby inflating commitment–withdrawal relationships.

Unfortunately, employee engagement has sometimes been defined to include behavioral as well as cognitive-affective components (see Little & Little, 2006).[12] This has led to certain inventories containing "behavioral engagement" items such as "I stay until the job is done," "I avoid working overtime whenever possible" (reverse-scored), and "I take work home to do" (May, Gilson, & Harter, 2004). Items such as these can easily be—and frequently are, even by subject matter experts—interpreted as organizational citizenship behavior (Dalal et al., 2011; Dalal, Brummel, Wee, & Thomas, 2008). If engagement measures containing such items are used to predict citizenship behavior, one would expect an artifactually high relationship because citizenship behavior is, in effect, being predicted by itself. It is consequently unclear to what extent the criterion-related validity claimed for employee engagement is actually due to predictor-criterion redundancy rather than genuine conceptual advances regarding the construct space of job attitudes.

In sum, the tasks facing future research on employee engagement (and, to a lesser extent, job involvement) are these:

1. Define the construct in ways that do not invoke other job attitudes.
2. Ensure that measures of the construct are not contaminated with items better characterized as indicators of other job attitudes or positive affect.
3. Ensure that measures of the construct are not contaminated with items better characterized as indicators of behavior/performance criteria.
4. Then, and only then, empirically demonstrate the construct's distinctiveness from, and its incremental criterion-related validity over, other job attitudes.[13]

If employee engagement is able to surmount these hurdles, its addition to the pantheon of job attitudes is assured. If it is unable to surmount these hurdles, researchers and practitioners will have committed the "jangle fallacy" (Kelley, 1927): we will erroneously have assumed that "engagement," "involvement," and "satisfaction" are different constructs *solely because* they are referred to by different names.

[12] As I mentioned at the beginning of this chapter, such a conflation of attitude and behavior is undesirable—but unfortunately rather commonplace.

[13] In this regard, it would be useful to demonstrate incremental validity over satisfaction with the nature of the work itself, not just overall job satisfaction. It is the former that is conceptually closer to employee engagement.

Alternatives to Self-Reported Job Satisfaction

The previous discussion of the measurement of the cognitive and affective aspects of job satisfaction was limited to self-reported satisfaction. Self-report is far and away the dominant approach to the measurement of job satisfaction. Yet, at least three alternative approaches exist: observational measures, physiological measures, and implicit attitude measures.

Observational measures have primarily been used to assess job affect. These methods can include the analysis of facial expressions, whole-body movements, and written or oral narratives (for more details, see Kaplan, Dalal, & Luchman, in press). As a particularly vivid example, research on "microfacial expressions" to detect concealed emotions and hence lies (Ekman, 2009) has been adapted, with a healthy dose of poetic license, for the television show *Lie to Me* (Cary, Graziano, Sackheim, Moosekian, & Grazer, 2009). Physiological measures (such as blood pressure reactivity, cortisol measurement, and frontal asymmetry in brain hemispheric activation), too, could be used to assess cognition and affect (Kaplan et al., in press; Larsen, Berntson, Poehlmann, Ito, & Cacioppo, 2008). Measures of implicit attitudes (attitudes not susceptible to conscious control or even awareness; e.g., Fazio & Olson, 2003; Nosek, 2007; Petty, Fazio, & Briñol, 2009; see also www.projectimplicit.net) are particularly popular in the study of social attitudes, especially those characterized by significant social desirability issues (e.g., racial attitudes). An example of an implicit attitude test for job satisfaction is provided by Leavitt, Fong, and Greenwald (2011). Moreover, these approaches are not mutually exclusive with each other or with self-reports. For example, physiological approaches can be used in the study of implicit attitudes (Cunningham, Packer, Kesek, & Van Bavel, 2009). As another example, implicit attitudes are believed to complement rather than supplement self-reported explicit attitudes: the former arguably reveal mental processes, whereas the latter arguably reveal an attempted self-assessment of these mental processes (Nosek, 2007).

Each of these alternatives, however, has its disadvantages. For observational measures to be valid, a series of requirements must be met: (a) the person's emotional state must translate into observable behavior (e.g., the wrinkling near the eyes that is characteristic of genuine smiles),[14] (b) this behavior must actually be observed,

[14] Observational methods are, in other words, more directly indicative of the *expression* or *display* of emotion than the *experience* of emotion (Kaplan et al., in press).

and (c) the observer must be able to infer the person's emotional state from the observed behavior (Chan, 2009; Kaplan et al., in press). A concern regarding physiological measures is that they are unlikely to be "pure" indicators of cognition and/or affect, making interpretation difficult (Kaplan et al., in press). For example, blood pressure is influenced by numerous factors other than cognition and affect (e.g., level of activity, nutritional factors, drugs, disease, hormonal imbalances; Kaplan et al., in press). Implicit measures have historically been plagued by conceptual and measurement-related questions (e.g., Bosson, Swann, & Pennebaker, 2000; Fazio & Olson, 2003). Thus, none of these alternative approaches is a panacea. Nonetheless, they, in conjunction with self-report approaches, have the potential to provide a much deeper conceptual understanding of job satisfaction (e.g., the interplay between conscious and nonconscious satisfaction, the physiological correlates of satisfaction).

A Within-Person Organizational Psychology

Affective Events Theory (Weiss & Cropanzano, 1996) provides the beginnings of a roadmap to nothing less than a within-person organizational psychology. A fairly similar approach by Kahneman and Riis (2005) performs the same function for psychology (and economics) more broadly. In this section, I present just a few of the many directions for future within-person organizational research.

The emphasis, in Affective Events Theory, on discrete events rather than stable situations permits the study of *specific* instances of work–family conflict (e.g., you are late to work because your husband cut himself while shaving and then inconveniently proceeded to bleed all over the carpet) and injustice (e.g., your work-group decides to split the lunch bill equally even though everyone else had a three-martini lunch while you ate a small salad), as well as their affective and, ultimately, behavioral effects. Indeed, work–family conflict and injustice can be reenvisioned as within-person processes: researchers can study employees over time with the aim of comparing occasions *when* each employee experiences work–family conflict or injustice to other occasions when he or she does not (for thus-far rare examples of such an approach in the work–family conflict area, see Foster, 2003; Ilies et al., 2007). More broadly, such an approach would facilitate the inclusion of affect into models of organizational justice—something that has repeatedly been advised (Bies & Tripp, 2002; Cropanzano, Weiss, Suckow, & Grandey, 2000; Dalal & Hulin, 2008; Weiss, Suckow, & Cropanzano, 1999).

In addition, if emotions and moods are to be studied as within-person phenomena, so too should emotional labor. Research on emotional labor has been slow to take a within-person perspective, but such studies are finally emerging (e.g., Judge, Woolf, & Hurst, 2009; McCance, 2010). We need to learn *when* employees engage in which types of emotional labor strategies, and what the resulting effects might be. Moreover, within-person studies present an ideal vehicle for disentangling the causal relationship between emotions and emotional labor: *a priori,* there is reason to expect both that emotional experience engenders emotional labor and that emotional labor itself engenders emotional reactions (Judge et al., 2009).

We should also be sensitive to the possibility that many forms of job performance that have traditionally been studied across people may, in fact, exhibit substantial within-person variability. For example, Dalal et al. (2009) estimated the percentage of variability that existed within rather than across persons at 44% to 52% for organizational citizenship behavior and 58% to 82% for counterproductive work behavior, Sonnentag (2003) found that two forms of proactive behavior exhibited 41% and 46% within-person variability, and Miner and Glomb (2010) found that objective task performance for call-center employees exhibited 64% within-person variability (which increased to 92% after controlling statistically for department membership). What these results, and others like them, suggest is that a large proportion of variance, perhaps even the *majority* of variance, in job performance is attributable to within-person sources—and that this within-person variability is overlooked by research conducted solely at the between-person level.

The aforementioned examples indicate that many research questions thus far studied across persons should also be studied within persons over time. This is important because findings at the within-person level of analysis need not mirror those at the between-person level of analysis (Dalal & Hulin, 2008; Dalal et al., 2009). One famous example is the effect of exercise on ambulatory blood pressure (Schwartz & Stone, 1998). Between persons, there is a negative relationship: blood pressure readings are lower for people who exercise more than for those who exercise less. Within persons, however, there is a positive relationship: blood pressure readings are higher while a person is exercising than while he or she is not. A second example—extremely controversial at first, but now replicated numerous times (Schmitt & DeShon, 2009; Vancouver & Kendall, 2006;

Vancouver, Thompson, Tischner, & Putka, 2002; Vancouver, Thompson, & Williams, 2001; Yeo & Neal, 2006; see also Richard, Diefendorff, & Martin, 2006)—is that, although self-efficacy is positively related to performance at the between-person level, it is negatively related to performance at the within-person level. Numerous slightly less dramatic examples are likely to be found, in which the *sign* of the relationship does not change across levels of analysis but the *size* of the relationship does.

However, there are additional reasons to conduct research at the within-person level. One reason is that the factor structures of constructs need not be similar across levels of analysis (Dalal & Hulin, 2008). For example, even if mood consists of two unipolar factors of positive affect and negative affect at the between-person level, at the within-person level a perfectly adequate (Kahneman, 1999) or even superior (Weiss & Cropanzano, 1996) conceptualization involves a single bipolar factor in which negative mood is merely the opposite of positive mood. Thus, within-person research would ideally begin by conducting factor analyses using techniques such as Chain P-technique (Cattell, 1963; for an application, see Dalal et al., 2009) or, better yet, Dynamic Factor Analysis (Nesselroade, McArdle, Aggen, & Meyers, 2002). Differences as well as similarities in factor structures across levels would be illuminating. A different approach would be to study both within- and between-person factor structures simultaneously by using three-mode factor analysis (e.g., Inn, Hulin, & Tucker, 1972; Kroonenberg, 2008).

Finally, within-person research allows for the promulgation and testing of episodic process models that have no good analog at the between-person level. Beal, Weiss, Barros, and MacDermid (2005), for example, presented a model of the *dynamic* effects of affect and attention regulation on task focus. Glomb et al. (2011) adapted and tested social psychological theories suggesting that mood *improves* after helping others.

In sum, a within-person organizational psychology is likely to look very different from its between-person counterpart but it is no less important for this difference. The contribution to basic theoretical understanding of the complexity of individuals at work is likely to be substantial. Ultimately, of course, the goal is to combine within-person and between-person models, along with top-down and bottom-up cross-level effects, into truly multilevel models. Affective Events Theory (Weiss & Cropanzano, 1996) and Kahneman's work (e.g., Kahneman & Riis, 2005) have provided us with a rudimentary roadmap, but our path to this destination is likely to be littered with "unknown unknowns" (Rumsfeld, 2002).

CONCLUSION

In this chapter I defined job satisfaction, discussed issues related to its measurement, reviewed theoretical models of and empirical results associated with its antecedents and consequences, and finally attempted to provide an agenda for the future. On the more traditional between-person side of job satisfaction, perhaps the most important avenue for future research involves employee engagement. As I have attempted to convey, concerns abound regarding the viability of this construct and its differentiability from job satisfaction and other job attitudes.

Yet, the future of job satisfaction research seems increasingly likely to be found at the within-person level of analysis (or at multiple levels studied simultaneously), via experience-sampling designs that involve numerous surveys of the same employee over time. After all, the major theme in this chapter is the distinction, albeit fuzzy and non-absolute, between the cognitive and affective components of job satisfaction. The long-term neglect of affect and its recent resurrection represent perhaps the two most important developments in the history of job satisfaction research. Accordingly, organizational psychologists have so much to learn about affect: its antecedents, its consequences (including the intriguing question of what happens when affective reactions and cognitive evaluations are *inconsistent* with each other; e.g., Kraus, 1995; Schleicher, Watt, & Greguras, 2004), even its structure. In so doing, we need to expand our repertoire of research designs and data-analytic approaches. There is more than enough here to keep researchers occupied for several decades. The potential for major contributions is high. All in all, this is an exciting time to be studying job satisfaction!

I end this chapter as I began it: by underscoring the importance of work, and jobs, to human existence and dignity. de Botton (2009b, p. C) called for "an art that can proclaim the intelligence, peculiarity, beauty, and horror of the workplace and, not least, its extraordinary claim to be able to provide us, alongside love, with the principal source of life's meaning." I agree completely, but I contend that we also need a *science* that does this. Such a science must accentuate both components of job satisfaction. It must aim to understand not just employees' long-term responses to their jobs, but also their momentary responses; not just how an employee's responses compare to those of other employees, but also how they compare to his or her own responses at other times; and not just how employees think about their jobs, but also how they feel. For too long, organizational

psychology turned its back on affect and within-person processes, and therefore lacked the potential to fully comprehend the meaning of work. At last, though, there is reason to be hopeful.

REFERENCES

Adams, J. S. (1965). Inequity in social exchange. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 2, pp. 267–299). New York: Academic Press.

Adolphs, R., & Damasio, A. R. (2001). The interaction of affect and cognition: A neurobiological perspective. In J. P. Forgas (Ed.), *Handbook of affect and social cognition* (pp. 27–49). Mahwah, NJ: Erlbaum.

Aiken, L. R. (1966). Another look at weighting test items. *Journal of Educational Measurement, 3,* 183–185.

Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology, 52,* 27–58.

Ajzen, I. (2005). Laws of human behavior: Symmetry, compatibility, and attitude-behavior correspondence. In A. Beauducel, B. Biehl, M. Bosniak, W. Conrad, G. Schönberger, & D. Wagener (Eds.), *Multivariate research strategies* (pp. 3–19). Aachen, Germany: Shaker Verlag.

Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173–222). Mahwah, NJ: Erlbaum.

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.

Arvey, R. D., McCall, B. P., Bouchard, T. J., Taubman, P., & Cavanaugh, M. A. (1994). Genetic influences on job satisfaction and work values. *Personality and Individual Differences, 17,* 21–33.

Baars, B. J. (1986). *The cognitive revolution in psychology.* New York, NY: Guilford Press.

Balzer, W. K., Kihm, J. A., Smith, P. C., Irwin, J. L., Bachiochi, P. D., Robie, C., Sinar, E. F., & Parra, L. F. (2000). Users' manual for the Job Descriptive Index (JDI; 1997 version) and the Job in General scales. In J. M. Stanton and C. D. Crossley (Eds.), *Electronic resources for the JDI and JIG.* Bowling Green, OH: Bowling Green State University.

Barrett, L. F., & Russell, J. A. (1998). Independence and bipolarity in the structure of current affect. *Journal of Personality and Social Psychology, 74,* 967–984.

Barsade, S., Brief, A., & Spataro, S. (2003). The affective revolution in organizational behavior: The emergence of a paradigm. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (pp. 3–52). London, England: Erlbaum.

Beal, D. J., & Weiss, H. M. (2003). Methods of ecological momentary assessment in organizational research. *Organizational Research Methods, 6,* 440–464.

Beal, D. J., Weiss, H. M., Barros, E., & MacDermid, S. M. (2005). An episodic process model of affective influences on performance. *Journal of Applied Psychology, 90,* 1054–1068.

Bem, D. J. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomena. *Psychological Review, 74,* 183–200.

Bies, R. J., & Tripp, T. M. (2002). "Hot flashes, open wounds": Injustice and the tyranny of its emotions. In S. W. Gilliland, D. D. Steiner, & D. P. Skarlicki (Eds.), *Emerging perspectives on managing organizational justice* (pp. 203–223). Greenwich, CT: Information Age Publishing (lAP) Press.

Bono, J. E., & Judge, T. A. (2003). Core self-evaluations: A review of the trait and its role in job satisfaction and job performance. *European Journal of Personality, 17,* S5–S18.

Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The meaning for personnel selection research. *Human Performance, 10,* 99–109.

Bosson, J. K., Swann, W. B., & Pennebaker, J. W. (2000). Stalking the perfect measure of implicit self-esteem: The blind men and the elephant revisited? *Journal of Personality and Social Psychology, 79,* 631–643.

Bouchard, T. J., Lykken, D. T., McGue, M., Segal, N. L., & Tellegen, A. (1990). Sources of human psychological differences: The Minnesota study of twins reared apart. *Science, 250* (4978), 223–228.

Bowen, D. E., & Ostroff, C. (2004). Understanding HRM-firm performance linkages: The role of the "strength" of the HRM system. *Academy of Management Review, 29,* 203–221.

Bozeman, D. P., & Perrewé, P. L. (2001). The effect of item content overlap on Organizational Commitment Questionnaire–turnover cognitions relationships. *Journal of Applied Psychology, 86,* 161–173.

Brayfield, A. H., & Crockett, W. H. (1955). Employee attitudes and employee performance. *Psychological Bulletin, 52,* 396–424.

Cary, A., Graziano, D., Sackheim, D., Moosekian, V., & Grazer, B. (Executive Producers). (2009). *Lie to me* [Television series]. Los Angeles, CA: Imagine Television and 20th Century Fox Television.

Cattell, R. B. (1963). The structuring of change by P-technique and incremental R-technique. In C. W. Harris (Ed.), *Problems in measuring change* (pp. 167–198). Madison, WI: University of Wisconsin Press.

Chaiken, S., & Stangor, C. (1987). Attitudes and attitude change. *Annual Review of Psychology, 38,* 575–630.

Chan, D. (1998). Functional relations among constructs in the same content domain at different levels of analysis: A typology of composition models. *Journal of Applied Psychology, 83,* 234–246.

Chan, D. (2009). So why ask me? Are self-report data really that bad? In C. E. Lance & R. J. Vandenberg (Eds.), *Statistical and methodological myths and urban legends: Doctrine, verity and fable in the organizational and social sciences* (pp. 309–336). New York, NY: Routledge.

Chen, X-P., Hui, C., & Sego, D. J. (1998). The role of organizational citizenship behavior in turnover: Conceptualization and preliminary tests of key hypotheses. *Journal of Applied Psychology, 83,* 922–931.

Cohen, J. (1977). *Statistical power analysis for the behavioral sciences* (Rev. ed.). San Diego, CA: Academic Press.

Cranny, C. J., Smith, P. C., & Stone, E. F. (1992). *Job satisfaction: How people feel about their jobs and how it affects their performance.* New York: Lexington Press.

Credé, M., & Dalal, R. S. (2002). *Affective cycles at work: An explanation for their importance, and a review of findings*. Presented at the annual meeting of the Academy of Management, Denver, CO.

Cropanzano, R., Weiss, H. M., Suckow, K. J., & Grandey, A. A. (2000). Doing justice to workplace emotion. In N. Ashkanasy, C. E. Hartel, & W. J: Zerbe (Eds.), *Emotions in the workplace: Research, theory, and practice* (pp. 49–62). Westport, CT: Quorum Books/Greenwood Publishing Group.

Cunningham, W. A., Packer, D. J., Kesek, A., & Van Bavel, J. J. (2009). Implicit measurement of attitudes: A physiological approach. In R. E. Petty, R. H., Fazio & P. Briñol (Eds.), *Attitudes: Insights from the new implicit measures* (pp. 485–512). New York, NY: Psychology Press.

Dalal, R. S. (2005). A meta-analysis of the relationship between organizational citizenship behavior and counterproductive work behavior. *Journal of Applied Psychology, 90,* 1241–1255.

Dalal, R. S., Bashshur, M. R., & Credé, M. (2011). The forgotten facet: Employee satisfaction with management above the level of immediate supervision. *Applied Psychology: An International Review, 60,* 183–209.

Dalal, R. S., Baysinger, M., Brummel, B. J., & LeBreton, J. M. (in press). The relative importance of employee engagement, other job attitudes,

and trait affect as predictors of overall employee job performance. *Journal of Applied Social Psychology*.

Dalal, R. S., Brummel, B. J., Wee, S., & Thomas, L. L. (2008). Defining employee engagement for productive research and practice. *Industrial and Organizational Psychology, 1,* 52–55.

Dalal, R. S., & Credé, M. (in press). Job satisfaction. In K. F. Geisinger (Ed.), *American Psychological Association handbook of testing and assessment in psychology*. Washington, DC: American Psychological Association.

Dalal, R. S., & Hulin, C. L. (2008). Motivation for what? The criterion question. In R. Kanfer, G. Chen, & R. Pritchard (Eds.), *Work motivation: Past, present and future* (pp. 63–100). New York, NY: Routledge.

Dalal, R. S., Lam, H., Weiss, H. M., Welch, E., & Hulin, C. L. (2009). A within-person approach to work behavior and performance: Concurrent and lagged citizenship–counterproductivity associations, and dynamic relationships with affect and overall job performance. *Academy of Management Journal, 52,* 1051–1066.

Davis-Blake, A. & Pfeffer, J. (1989). Just a mirage: The search for dispositional effects in organizational research. *Academy of Management Review, 14,* 385–400.

de Botton, A. (2009a). *The pleasures and sorrows of work.* New York, NY: Pantheon/Random House.

de Botton, A. (2009b, May 31). Portrait of the artist as a young data-entry supervisor: It's time for an ambitious new literature of the office. *Boston Globe,* p. C.

Donnelly, D. P., & Quirin, J. J. (2006). An extension of Lee and Mitchell's unfolding model of voluntary turnover. *Journal of Organizational Behavior, 27,* 59–77.

Dunham, R. B., & Herman, J. B. (1975). Development of a female Faces scale for measuring job satisfaction. *Journal of Applied Psychology, 60,* 629–681.

Dunham, R. B., & Smith, F. J. (1979). *Organizational surveys: An internal assessment of organizational health.* Glenview, IL: Scott-Foresman.

Dunham, R. B., Smith, F. J., & Blackburn, R. S. (1977). Validation of the Index of Organizational Reactions with the JDI, the MSQ, and Faces Scales. *Academy of Management Journal, 20,* 420–432.

Edwards, J. R. (1991). Person–job fit: A conceptual integration, literature review, and methodological critique. *International Review of Industrial and Organizational Psychology, 6,* 283–357.

Edwards, J. R. (2002). Alternatives to difference scores: Polynomial regression analysis and response surface methodology. In F. Drasgow & N. W. Schmitt (Eds.), *Advances in measurement and data analysis* (pp. 350–400). San Francisco, CA: Jossey-Bass.

Ekman, P. (2009). Lie catching and microexpressions. In C. Martin (Ed.), *The philosophy of deception* (pp. 118–133). Oxford, England: Oxford University Press.

Eschleman, K. J., & Bowling, N. A. (in press). A construct validation of the Neutral Objects Satisfaction Questionnaire. *Journal of Business and Psychology*.

Fazio, R. H., & Olson, M. A. (2003). Implicit measures in social cognition research: Their meaning and use. *Annual Review of Psychology, 54,* 297–327.

Feldman, D. C., & Arnold, H. J. (1978). Position choice: Comparing the importance of organizational and job factors. *Journal of Applied Psychology, 63,* 706–710.

Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

Festinger, L., & Carlsmith, J. M. (1959). Cognitive consequences of forced compliance. *Journal of Abnormal and Social Psychology, 58,* 203–210.

Foster, J. B. (2003). *Child care disruptions and working mothers: An experience sampling method approach* [Unpublished doctoral dissertation]. Rice University, Houston, TX.

Fried, Y., & Ferris, G. R. (1987). The validity of the job characteristics model: A review and meta-analysis. *Personnel Psychology, 40,* 287–322.

Frost, R. (2002). *The road not taken: A selection of Robert Frost's poems.* New York, NY: Holt.

Frye, C. M. (1996). *New evidence for the Job Characteristics Model: A meta-analysis of the job characteristics-job satisfaction relationship using composite correlations*. Paper presented at the Eleventh Annual Meeting of the Society for Industrial and Organizational Psychology, San Diego, CA.

Glomb, T. M., Bhave, D. P., Miner, A. G., & Wall, M. (2011). Doing good, feeling good: Examining the role of organizational citizenship behaviors in changing mood. *Personnel Psychology, 64,* 191–223.

Glomb, T. M., Munson, L. J., Hulin, C. L., Bergman, M. E., & Drasgow, F. (1999). Structural equation models of sexual harassment: Longitudinal explorations and cross-sectional generalizations. *Journal of Applied Psychology, 84,* 14–28.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of Management, 26,* 463–488.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance, 16,* 250–279.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign*. Reading, MA: Addison-Wesley.

Hanisch, K. A. (1992). The Job Descriptive Index revisited: Questions about the question mark. *Journal of Applied Psychology, 77,* 377–382.

Hanisch, K. A. and Hulin, C. L. (1990). Job attitudes and organizational withdrawal: An examination of retirement and other voluntary withdrawal behaviors. *Journal of Vocational Behavior, 37,* 60–78.

Hanisch, K. A. and Hulin, C. L. (1991). General attitudes and organizational withdrawal: An evaluation of a causal model. *Journal of Vocational Behavior, 39,* 110–128.

Hanisch, K. A., Hulin, C. L., & Roznowski, M. (1998). The importance of individuals' repertoires of behaviors: The scientific appropriateness of studying multiple behaviors and general attitudes. *Journal of Organizational Behavior, 19,* 463–480.

Harrison, D. A. (2002). Meaning and measurement of work role withdrawal: Current controversies and future fallout from changing information technology. In M. Koslowsky & M. Krausz (Eds.), *Voluntary employee withdrawal and inattendance: A current perspective* (pp. 95–131). New York, NY: Kluwer Academic/Plenum Publishers.

Harrison, D. A., Newman, D. A., & Roth, P. L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal, 49,* 305–325.

Harter, J. K., & Schmidt, F. L. (2008). Conceptual versus empirical distinctions among constructs: Implications for discriminant validity. *Industrial and Organizational Psychology, 1,* 36–39.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87,* 268–279.

Hektner, J. M., Schmidt, J. A., & Csikszentmihalyi, M. (2007). Experience sampling method: Measuring the quality of everyday life. Thousand Oaks, CA: Sage.

Herzberg, F. (1967). *Work and the nature of man*. Cleveland, OH: World Book.

Holt, D. T., Rehg, M. T., Lin, J. H. S., & Miller, J. (2007). An application of the unfolding model to explain turnover in a sample of military officers. *Human Resource Management, 46,* 35–49.

Hom, P. W., Caranikas-Walker, F., Prussia, G. E., & Griffeth, R. W. (1992). A meta-analytical structural equations analysis of a

model of employee turnover. *Journal of Applied Psychology, 77,* 890–909.

Hoppock, R. (1935). *Job satisfaction*. New York, NY: Harper.

Hulin, C. L. (1966). The effects of community characteristics on measures of job satisfaction. *Journal of Applied Psychology, 50,* 185–192.

Hulin, C. L. (1969). Sources of variation in job and life satisfaction: The role of community and job-related variables. *Journal of Applied Psychology, 53,* 279–291.

Hulin, C. L. (1991). Adaptation, persistence, and commitment in organizations. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology* (2nd ed., Vol. 2, pp. 445–505). Palo Alto, CA: Consulting Psychologist Press.

Hulin, C. L. (2002). Lessons from industrial and organizational psychology. In J. M. Brett & F. Drasgow (Eds.), *The psychology of work: Theoretically based empirical research* (pp. 3–22). Mahwah, NJ: Erlbaum.

Hulin, C. L., Roznowski, M., & Hachiya, D. (1985). Alternative opportunities and withdrawal decisions: Empirical and theoretical discrepancies and an integration. *Psychological Bulletin, 97,* 233–250.

Hulin, C. L., & Smith, P. A. (1967). An empirical investigation of two implications of the two-factor theory of job satisfaction. *Journal of Applied Psychology, 51,* 396–402.

Ilies, R., & Judge, T. A. (2003). On the heritability of job satisfaction: The mediating role of personality. *Journal of Applied Psychology, 88,* 750–759.

Ilies, R., Schwind, K. M., Wagner, D. T., Johnson, M. D., DeRue, D. S., & Ilgen, D. R. (2007). When can employees have a family life? The effects of daily workload and affect on work–family conflict and social behaviors at home. *Journal of Applied Psychology, 92,* 1368–1379.

Inn, A., Hulin, C. L., & Tucker, L. (1972). Three sources of criterion variance: Static dimensionality, dimensional dimensionality, and individual dimensionality. *Organizational Behavior and Human Performance, 8,* 58–83.

Ironson, G. H., Smith, P. C., Brannick, M. T., Gibson, W. M., & Paul, K. B. (1989). Construction of a Job in General scale: A comparison of global, composite, and specific measures. *Journal of Applied Psychology, 74,* 193–200.

Ishiguro, K. (1988). *The remains of the day.* New York, NY: Vintage/Random House.

James, L. R., & Jones, A. P. (1980). Perceived job characteristics and job satisfaction: An examination of reciprocal causation. *Personnel Psychology, 33,* 97–135.

James, L. R., & Tetrick, L. E. (1986). Confirmatory analytic tests of three causal models relating job perceptions to job satisfaction. *Journal of Applied Psychology, 71,* 77–82.

Johns, G. (2001). The psychology of lateness, absenteeism, and turnover. In N. Anderson, D. S. Ones, H. P. Sinangil, & C. Viswesvaran (Eds.), *Handbook of Industrial, Work and Organizational Psychology* (Vol. 2, pp. 232–252). London, England: Sage.

Judge, T. A., & Bono, J. E. (2001). 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., Heller, D., & Klinger, R. (2008). The dispositional sources of job satisfaction: A comparative test. *Applied Psychology: An International Review, 57,* 361–372.

Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87,* 530–541.

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., Piccolo, R. F., Podsakoff, N. P., Shaw, J. C., & Rich, B. L. (2010). The relationship between pay and job satisfaction: A meta-analysis of the literature. *Journal of Vocational Behavior, 77,* 157–167.

Judge, T. A., Scott, B. A., & Ilies, R. (2006). Hostility, job attitudes, and workplace deviance: Test of a multilevel model. *Journal of Applied Psychology, 91,* 126–138.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127,* 376–407.

Judge, T. A., Woolf, E. F., & Hurst, C. (2009). Is emotional labor more difficult for some than for others? A multilevel, experience-sampling study. *Personnel Psychology, 62,* 57–88.

Jurgensen, C. E. (1978). Job preferences (What makes a job good or bad?). *Journal of Applied Psychology, 63,* 267–276.

Kahneman, D. (1999). Objective happiness. In E. Diener, N. Schwarz, and D. Kahneman (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 3–27). New York, NY: Russell Sage Foundation.

Kahneman, D., & Krueger, A. (2006). Developments in the measurement of subjective well-being. *Journal of Economic Perspectives, 20,* 3–24.

Kahneman, D., & Riis, J. (2005) Living, and thinking about it: Two perspectives on life. In F. A. Huppert, B. Kaverne, & N. Baylis (Eds.), *The science of well-being* (pp. 285–304). London, England: Oxford University Press.

Kanner, A. D., Coyne, J. C., Schaefer, C., & Lazarus, R. S. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. *Journal of Behavioral Medicine, 4,* 1–39.

Kaplan, S., Dalal, R. S., & Luchman, J. (in press). Measurement of emotions. In R. Sinclair, M. Wang, & L. Tetrick (Eds.), *Research methods in occupational health psychology: State of the art in measurement, design, and data analysis.* New York, NY: Routledge.

Kelley, T. L. (1927). *Interpretation of educational measurements.* Yonkers-on-Hudson, NY: World Book.

Kendall, L. M. (1963). *Canonical analysis of job satisfaction and behavioral, personal background, and situational data* [Unpublished doctoral dissertation]. Cornell University, Ithaca, NY.

Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin, 21,* 58–75.

Kristof, A. L. (1996). Person–organization fit: An integrative review of its conceptualizations, measurement, and implications. *Personnel Psychology, 49,* 1–49.

Kristof-Brown, A. L., & Guay, R. P. (2011). Person–environment fit. In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology: Vol. 3. Maintaining, expanding, and contracting the organization* (pp. 3–50). Washington, DC: American Psychological Association.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences of individuals' fit at work: A meta-analysis of person–job, person–organization, person–group, and person–supervisor fit. *Personnel Psychology, 58,* 281–342.

Kroonenberg, P. M. (2008). *Applied multiway data analysis.* Hoboken, NJ: John Wiley & Sons.

Kunin, T. (1955). The construction of a new type of attitude measure. *Personnel Psychology, 8,* 65–77.

Larsen, J. T., Berntson, G. G., Poehlmann, K. M., Ito, T. A., & Cacioppo, J. T. (2008). The psychophysiology of emotion. In R. Lewis, J. M. Haviland-Jones, & L. F. Barrett (Eds.), *The handbook of emotions* (3rd ed., pp. 180–195). New York, NY: Guilford Press.

Lavelle, J. J., Rupp, D. E., & Brockner, J. (2007). Taking a multifoci approach to the study of justice, social exchange, and citizenship behavior: The target similarity model. *Journal of Management, 33,* 841–866.

Lawler, E. E. I., & Porter, L. W. (1967). The effect of performance on job satisfaction. *Industrial Relations, 7,* 20–28.

Leavitt, K., Fong, C. T., & Greenwald, A. G. (2011). Asking about well-being gets you half an answer: Intra-individual processes of implicit and explicit job attitudes. *Journal of Organizational Behavior, 32,* 672–687.

Lee, T. W., Mitchell, T. R., Holtom, B. C., McDaniel, L. S., & Hill, J. W. (1999). The unfolding model of voluntary turnover: A replication and extension. *Academy of Management Journal, 42,* 450–462.

Lee, T. W., Mitchell, T. R., Wise, L., & Fireman, S. (1996). An unfolding model of voluntary employee turnover. *Academy of Management Journal, 39,* 5–36.

Little, B., & Little, P. (2006). Employee engagement: Conceptual issues. *Journal of Organizational Culture, Communications and Conflict, 10,* 111–120.

Locke, E. A. (1969). What is job satisfaction? *Organizational Behavior and Human Performance, 4,* 309–336.

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, IL: Rand McNally.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57,* 705–717.

Macey, W. H. & Schneider, B. (2008). The meaning of employee engagement. *Industrial and Organizational Psychology, 1,* 3–30.

March, J. G., & Simon, H. A. (1958). *Organizations.* New York, NY: Wiley.

May, D., Gilson, R., Harter, L. (2004). The psychological conditions of meaningfulness, safety, and availability and the engagement of the human spirit at work. *Journal of Occupational and Organizational Psychology, 77,* 11–37.

McCance, A. S. (2010). *Emotional labor in intercultural service encounters: An experience sampling study* [Doctoral dissertation]. Retrieved from www.ideals.illinois.edu/bitstream/handle/2142/18445/McCance_Andrea.pdf?sequence=1

Meyer, R. D., Dalal, R. S., & Hermida, R. (2010). A review and synthesis of situational strength in the organizational sciences. *Journal of Management, 36,* 121–140.

Mikes, P. S., & Hulin, C. L. (1968). The use of importance as a weighting component of job satisfaction. *Journal of Applied Psychology, 52,* 394–398.

Miller, A. (1949). *Death of a salesman.* New York, NY: Penguin Books.

Miner, A. G., & Glomb, T. M. (2010). State mood, task performance, and behavior at work: A within-persons approach. *Organizational Behavior and Human Decision Processes, 112,* 43–57.

Miner, A. G., Glomb, T. M., & Hulin, C. (2005). Experience sampling mood and its correlates at work. *Journal of Occupational and Organizational Psychology, 78,* 171–193.

Morrell, K., Loan-Clarke, J., Arnold, J., & Wilkinson, A. (2008). Mapping the decision to quit: A refinement and test of the unfolding model of voluntary turnover. *Applied Psychology: An International Review, 57,* 128–150.

Nesselroade, J. R., McArdle, J. J., Aggen, S. H., & Meyers, J. M. (2002). Dynamic factor analysis models for representing process in a multivariate time-series. In D. S. Moskowitz & S. L. Hershberger (Eds.), *Modeling intraindividual variability with repeated measures data: Methods and applications* (pp. 235–265). Mahwah, NJ: Erlbaum.

Newman, D. A., & Harrison, D. A. (2008). Been there, bottled that: Are state and behavioral work engagement new and useful construct "wines?" *Industrial and Organizational Psychology, 1,* 31–35.

Niederman, F., Sumner, M., & Maertz, C. P. (2007). Testing and extending the unfolding model of voluntary turnover to IT professionals. *Human Resource Management, 46,* 331–347.

Nosek, B. A. (2007). Implicit–explicit relations. *Current Directions in Psychological Science, 16,* 65–69.

Olson, J. M., & Stone, J. (2005). The influence of behavior on attitudes. In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 223–272). Mahwah, NJ: Erlbaum.

Paullay, I. M., Alliger, G. M., & Stone-Romero, E. F. (1994). Construct validation of two instruments designed to measure job involvement and work centrality. *Journal of Applied Psychology, 79,* 224–228.

Petty, R. E., Fazio, R. H., & Briñol, P. (Eds.) (2009). *Attitudes: Insights from the new implicit measures.* New York, NY: Psychology Press.

Probst, T. M. (2003). Development and validation of the Job Security Index and the Job Security Satisfaction scale: A classical test theory and IRT approach. *Journal of Occupational and Organizational Psychology, 76,* 451–467.

Ree, M. J., Carretta, T. R., & Earles, J. A. (1998). In top-down decisions, weighting variables does not matter: A consequence of Wilks' theorem. *Organizational Research Methods, 1,* 407–420.

Rice, R. W., Gentile, D. A., & McFarlin, D. B. (1991). Facet importance and job satisfaction. *Journal of Applied Psychology, 76,* 31–39.

Richard, E. M., Diefendorff, J. M., & Martin, J. H. (2006). Revisiting the within-person self-efficacy and performance relation. *Human Performance, 19,* 67–87.

Riketta, M. (2008). The causal relation between job attitudes and performance: A meta-analysis of panel studies. *Journal of Applied Psychology, 93,* 472–481.

Roethlisberger, F. J., & Dickson, W. J. (1939). *Management and the worker*. Cambridge, MA: Harvard University Press.

Rosse, J. G., & Hulin, C. L. (1985). Adaptation to work: An analysis of employee health, withdrawal, and change. *Organizational Behavior and Human Decision Processes, 36,* 324–347.

Roznowski, M. (1989). Examination of the measurement properties of the Job Descriptive Index with experimental items. *Journal of Applied Psychology, 74,* 805–814.

Roznowski, M., & Hulin, C. L. (1992). The scientific merit of valid measures of general constructs with special reference to job satisfaction and job withdrawal. In C. J. Cranny, P. C. Smith, & E. F. Stone (Eds.), *Job satisfaction: How people feel about their jobs and how it affects their performance* (pp. 123–163). New York, NY: Lexington Books.

Rumsfeld, D. (2002, February 12). DoD news briefing–Secretary Rumsfeld and Gen. Myers. Retrieved from www.defense.gov/transcripts/transcript.aspx?transcriptid=2636

Rynes, S. L., Gerhart, B., & Minette, K. A. (2004). The importance of pay in employee motivation: Discrepancies between what people say and what they do. *Human Resource Management, 43,* 381–394.

Saari, L. M., & Judge, T. A. (2004). Employee attitudes and job satisfaction. *Human Resource Management, 43,* 395–407.

Scarpello, V., & Campbell, J. P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology, 36,* 577–600.

Schleicher, D. J., Hansen, D., & Fox, K. E. (2011). In S. Zedeck (Ed.), *APA handbook of industrial and organizational psychology: Vol 3. Maintaining, expanding, and contracting the organization, APA Handbooks in Psychology* (pp. 137–189). Washington, DC: American Psychological Association.

Schleicher, D. J., Watt, J. D., & Greguras, G. J. (2004). Reexamining the job satisfaction–performance relationship: The complexity of attitudes. *Journal of Applied Psychology, 89,* 165–177.

Schmitt, A. M., & DeShon, R. P. (2009). Prior performance and goal progress as moderators of the relationship between self-efficacy and performance. *Human Performance, 22,* 191–203.

Schneider, B., Macey, W. H., Barbera, K. M., Young, S. A., & Lee, W. (2006). *Employee engagement: Everything you wanted to know*

about engagement but were afraid to ask. Rolling Meadows, IL: Valtera.

Schwartz, J. E., & Stone, A. A. (1998). Strategies for analyzing ecological momentary assessment data. *Health Psychology, 17,* 6–16.

Shanock, L. R., Baran, B. E., Gentry, W. A., Pattison, S. C., & Heggestad, E. D. (2010). Polynomial regression with response surface analysis: A powerful approach for examining moderation and overcoming limitations of difference scores. *Journal of Business and Psychology, 25,* 543–554.

Shaver, N., Schwartz, J., Kirson, D., & O'Connor, C. (1987). Emotion knowledge: Further exploration of a prototype approach. *Journal of Personality and Social Psychology, 45,* 513–523.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, 68,* 653–663.

Smith, P. C., Kendall, L. M., & Hulin, C. L. (1969). *Measurement of satisfaction in work and retirement*. Chicago, IL: Rand McNally.

Sonnentag, S. (2003). Recovery, work engagement, and practice behavior: A new look at the interface between nonwork and work. *Journal of Applied Psychology, 88,* 518–528.

Sonnentag, S., & Ilies, R. (2011). Intra-individual processes linking work and employee well-being: Introduction into the special issue. *Journal of Organizational Behavior, 32,* 521–525.

Spector, P. E., Fox, S., Penney, L. M., Bruursema, K., Goh, A., & Kessler, S. (2006). The dimensionality of counterproductivity: Are all counterproductive behaviors created equal? *Journal of Vocational Behavior 68,* 446–460.

Staw, B. M., Bell, N. E., & Clausen, J. A. (1986). The dispositional approach to job attitudes: A lifetime longitudinal test. *Administrative Science Quarterly, 31,* 437–453.

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.

Stevenson, B. & Wolfers, J. (2008). Economic growth and happiness: Reassessing the Easterlin Paradox. *Brookings Papers on Economic Activity, Spring 2008,* 1–87.

Stone, E. F., Stone, D. L., & Gueutal, H. G. (1990). Influence of cognitive ability on responses to questionnaire measures: Measurement precision and missing response problems. *Journal of Applied Psychology, 75,* 418–427.

Tellegen, A., Watson, D., & Clark, L. A. (1999a). On the dimensional and hierarchical structure of affect. *Psychological Science, 10,* 297–303.

Tellegen, A., Watson, D., & Clark, L. A. (1999b). Further support for a hierarchical model of affect: Reply to Green and Salovey. *Psychological Science, 10,* 307–309.

Terkel, S. (1974). *Working: People talk about what they do all day and how they feel about what they do.* New York, NY: Pantheon/Random House.

Tett, R. P., & Meyer, J. P. (1993). Job satisfaction, organizational commitment, turnover intention, and turnover: Path analyses based on meta-analytic findings. *Personnel Psychology, 46,* 259–293.

Thibaut, J. W. & Kelley, H. H. (1959). *The social psychology of groups*. New York, NY: Wiley.

Thurstone, L. L. (1928). Attitudes can be measured. *American Journal of Sociology, 33,* 529–554.

Vancouver, J. B., & Kendall, L. N. (2006). When self-efficacy negatively relates to motivation and performance in a learning context. *Journal of Applied Psychology, 91,* 1146–1153.

Vancouver, J. B., Thompson, C. M., Tischner, E. C., & Putka, D. J. (2002). Two studies examining the negative effects of self-efficacy on performance. *Journal of Applied Psychology, 87,* 506–516.

Vancouver, J. B., Thompson, C. M., & Williams, A. A. (2001). The changing signs in the relationships among self-efficacy, personal goals, and performance. *Journal of Applied Psychology, 86,* 605–620.

Wainer, H. (1976). Estimating coefficients in linear models: It don't make no nevermind. *Psychological Bulletin, 83,* 213–217.

Wainer, H. (1978). On the sensitivity of regression and regressors. *Psychological Bulletin, 85,* 267–273.

Watson, D., & Clark, L. A. (1999). The PANAS-X: Manual for the Positive and Negative Affect Schedule—Expanded Form. Retrieved from www.psychology.uiowa.edu/Faculty/Watson/PANAS-X.pdf

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.

Weiss, D. J., Dawis, R. V., England, G. W., & Lofquist, L. H. (1967). *Manual of the Minnesota Satisfaction Questionnaire.* Minneapolis, MN: Work Adjustment Project.

Weiss, H. M. (2002). Deconstructing job satisfaction: Separating evaluations, beliefs and affective experiences. *Human Resource Management Review, 12,* 173–194.

Weiss, H. M., & Brief, A. P. (2001). Affect at work: An historical perspective. In R. L. Payne & C. L. Cooper (Eds.), *The psychology of work: Theoretically based empirical research*. Hillsdale, NJ: Erlbaum.

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, 19,* 1–74.

Weiss, H. M., Nicholas, J. P., & Daus, C. S. (1999). An examination of the joint effects of affective experiences and job satisfaction and variations in affective experiences over time. *Organizational Behavior and Human Decision Processes, 78,* 1–24.

Weiss, H. M., Suckow, K., & Cropanzano, R. (1999). Effects of justice conditions on discrete emotions. *Journal of Applied Psychology, 84,* 786–794.

Weitz, J. (1952). A neglected concept in the study of job satisfaction. *Personnel Psychology, 5,* 201–205.

Wheeler, L., & Reis, H. T. (1991). Self-recording of everyday life events: Origins, types, and uses. *Journal of Personality, 59,* 339–354.

Whitman, D. S., Van Rooy, D. L., & Viswesvaran, C. (2010). Satisfaction, citizenship behaviors, and performance in work units: A meta-analysis of collective construct relations. *Personnel Psychology, 63,* 41–81.

Wyer, R. S. (1974). *Cognitive organization and change: An information processing approach.* Oxford, England: Erlbaum.

Yang, L.-Q., Levine, E. L., Smith, M. A., Ispas, D., & Rossi, M. E. (2008). Person–environment fit or person plus environment: A meta-analysis of studies using polynomial regression analysis. *Human Resource Management Review, 18,* 311–321.

Yeo, G., & Neal, A. (2006). An examination of the dynamic relationship between self-efficacy and performance across levels of analysis and levels of specificity. *Journal of Applied Psychology, 91,* 1088–1011.