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Job Attitudes, Job Satisfaction, and Job Affect: A Century of Continuity and of Change

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Over the past 100 years, research on job attitudes has improved in the sophistication of methods and in the productive use of theory as a basis for fundamental research into questions of work psychology. Early research incorporated a diversity of methods for measuring potential predictors and outcomes of job attitudes. Over time, methods for statistically assessing these relationships became more rigorous, but the field also became narrower. In recent years, developments in theory and methodology have reinvigorated research, which now addresses a rich panoply of topics related to the daily flow of affect, the complexity of personal motives and dispositions, and the complex interplay of attitude objects and motivation in shaping behavior. Despite these apparent changes, a review of the concepts and substantive arguments that underpin this literature have remained remarkably consistent. We conclude by discussing how we expect that these major themes will be addressed in the future, emphasizing topics that have proven to be enduring guides for understanding the ways that people construe and react to their appraisals of their work.

Keywords: job attitudes, job satisfaction, job affect, organizational commitment

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The epigram "*Plus ça change, plus c'est la même chose*" (Karr, 1859, p. 305) is as applicable to job attitudes research as any topical or basic area. The change in job attitudes research over time is obvious. Even a superficial historical analysis of job attitudes research appearing in this journal would reveal vast temporal differences in methods, theorizing, terminology, and topical choice. A simple statistical summary of employees' reactions to forms of music piped into the architectural drafting room (Gatewood, 1921) would have as little chance of being published in the *Journal of Applied Psychology* today, as would an analysis of the aptitudes and attitudes of "morons" as employees contributing to the war effort (Mateer, 1917).

By the same token, we would argue that the central preoccupations of applied psychology are—and should be—now as they were then. In their foreword announcing the launch of *Journal of Applied Psychology*, Hall, Baird, and Geissler (1917) argued that in addition to advancing science, findings from applied psychology

> may also contribute their quota to the sum-total of human happiness; and it must appeal to every human being who is interested in increasing human efficiency and human happiness by the more direct method of decreasing the number of cases where a square peg is condemned to a life of fruitless endeavor to fit itself comfortably into a round hole. (p. 6)

This statement is striking in its prescience; it foreshadows a century of ideas with which attitudes research remains concerned today. It also emphasizes the degree to which the concern with "human happiness" is as legitimate and socially important as the concern with efficiency. Finally, of equal importance, it establishes the notion that job attitudes are a vital concern both in terms of "pure science" of work psychology and toward applied organizational ends.

It is through these counterpoises—basic yet applied; discipline-based yet particularistic; evolving yet, in some ways, constant—that job attitudes research always has been, and continues to be, a central area of concern among organizational and work psychologists. Our review is organized as follows: First, we provide definitions of job attitudes and evaluate the prevalence of various conceptualizations of attitudes over time. Second, we provide an epochal historical overview of the research literature. Third and fourth, we review progress regarding the causes and consequences of job attitudes. We should note that we also discuss measures and

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methods in the research literature that have both critically contributed to and benefitted from job attitudes research. However, due to space limitations, this discussion, along with tables that identify the most common measures used in job satisfaction and organizational commitment research, appear in the supplemental materials to this article. Finally, we provide some suggestions regarding how the literature may develop in the future.

Concepts, Constructs, Terminologies, and Foci

Since the inception of our field, psychologists have found it useful to develop concepts that describe how people think about and relate to their work and jobs. Labels such as job satisfaction, morale, commitment, involvement, engagement, work subjective well-being, and work affect have all been invoked. Researchers have taken great pains to separate each new construct theoretically from existing, more familiar constructs. Frequently, the theoretical arguments for separation are more persuasive than the subsequent empirical efforts to demonstrate discriminant validity. The overall convergence of these constructs should not be surprising, because they all attempt to capture the way people experience and relate to their work and all have some degree of subjective evaluation as part of their core of meaning.

Within this universe of related constructs, job satisfaction clearly has been the most studied construct. One way of demonstrating this is to examine the percent of entries in the PsycINFO database using various labels for attitudes over time. Here, we included the terms j*ob satisfaction*, *organizational commitment*, and facet measures including satisfaction with work, tasks, supervision, promotions, pay, and job involvement.[1] In Figure 1, we show that job satisfaction is featured most frequently, consistently mentioned in over 70% of articles over time. After a brief heyday of "work satisfaction" in the 1930s and 1940s, job satisfaction rises to be featured in over 80% of attitude-related articles from 1950 onward, with organizational commitment appearing prominently in the period from 1990 forward. Figure 2 reveals similar results when limiting the search to articles appearing in *Journal of Applied Psychology*, albeit with a lower proportion of articles focused on job satisfaction and a higher proportion of articles focused on organizational commitment in recent years.

Definition and Nature of Job Attitudes

As a starting point for our review, a clear set of boundaries for an investigation should be established. Eagly and Chaiken (1993) have given one of the most influential definitions of attitudes, proposing that an "attitude is a psychological tendency that is expressed by evaluating a particularly entity with some degree of favor or disfavor" (p. 1). Other work distinguishes attitudes from beliefs; whereas beliefs can be compared against external criteria that have some objective status, attitudes cannot be supported or undermined by an external standard (Albarracín, Zanna, Johnson, & Tarcan, 2005). Unlike general affective reactions such as moods, however, attitudes are necessarily tied to a specific, particular source.

At its core, job satisfaction refers to the overall evaluative judgment one has about one's job (Weiss, 2002). That is, satisfaction is the assessment of the favorability of a job, typically arrayed along a continuum from positive to negative. Organizational psychologists have distinguished between overall satisfaction, the judgment one has or expresses about one's job as a whole (Brayfield & Rothe, 1951), and facet satisfactions, evaluations of aspects of one's job like work tasks, pay, promotions, supervision, or coworkers such as those that make up the Job Descriptive Index (Smith, Kendall, & Hulin, 1969). Research has sometimes assumed a part–whole relationship, suggesting that the overall evaluation is composed of weighted, additive summary of the facet evaluations. Though of course they are conceptually and empirically related, research has shown that a general attitude toward a job is distinct from attitudes about various features of the job (Ironson, Smith, Brannick, Gibson, & Paul, 1989).

Commitment at work is similar to satisfaction in that it involves a sense of one's positive or negative reaction to a specific object. Unlike satisfaction, at least in concept, commitment reflects a values-based appraisal of an object as opposed to the hedonic outcomes of interacting with the object (Porter, Steers, Mowday, & Boulian, 1974). As such, if one is committed to a job, it is seen specifically as fulfilling one's values, which should lead to maintaining effort toward the job even if it is cognitively and affectively perceived as producing negative outcomes for the self. In addition, commitment is theoretically expected to arise only with the passage of time through a process of growing identification and internalization of the work role (O'Reilly & Chatman, 1986). One could, however, be satisfied with a job's features very early on even if not committed to the job until later.

Having defined two common forms of job attitudes, we note from the start that certain self-report variables that have elements of appraisal are distinct from attitudes based on the established definition. For example, at least in concept, engagement is distinct from an attitude because it is primarily a motivational construct, reflecting the investment of physical, cognitive, and emotional energies into job performance rather than an appraisal of the job itself as favorable or unfavorable (Rich, LePine, & Crawford, 2010). Attitudes can also be distinguished from evaluations of fairness or justice, organizational support, or interpersonal support, because these appraisals are beliefs regarding the intentions and actions of others, rather than the direct appraisal of the favor or disfavor one holds regarding others (e.g., Rhoades, Eisenberger, & Armeli, 2001). While engagement and perceived support are naturally related to attitudes, they have been shown to be both theoretically and empirically distinct.

The role of affect is a final consideration. Recent years have seen a resurgence of discussion about the role of affect. Some researchers prefer to distinguish satisfaction as an evaluative judgment from affective states as causes of those judgments (e.g., Weiss & Cropanzano, 1996; Weiss, 2002). Others see satisfaction as a multicomponent construct, containing both cognitive and affective elements (e.g., Brief, 1998; Judge & Ilies, 2004). As we describe in our review of the historical developments in this area, the cognitive or purely evaluative aspects have been the predom-

[1] The search used adjacent terms and near matches for featured terms, such as *supervision*, and *supervisor*. Other facet job attitudes like satisfaction with coworkers or work groups were also assessed, and were even less commonly found than terms like pay satisfaction. The total number of articles was computed as the sum of all hits for search terms, net of article titles or abstracts that mentioned multiple attitudes (e.g., papers that addressed both job satisfaction and organizational commitment).

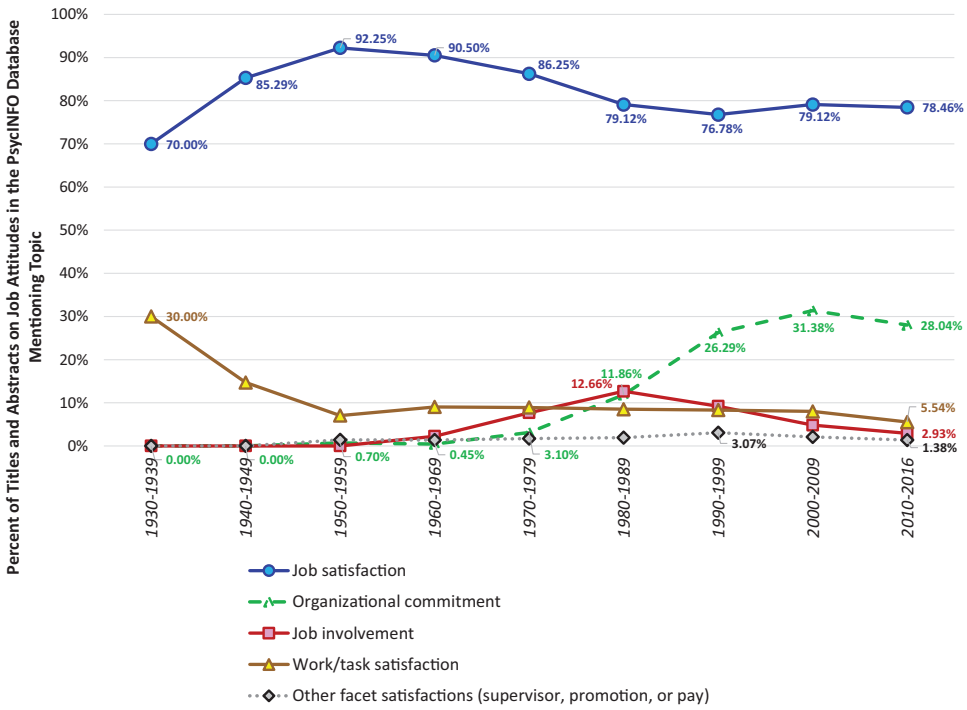

Figure 1. Proportion of all articles per decade in the PsycINFO database concerning different job attitudes over time. All percentages for job satisfaction and organizational commitment are shown. For the other attitudes, only the peak decade and most recent percentages are shown. In some cases, percentages total more than 100% because of multiple attitudes mentioned in the same article. See the online article for the color version of this figure.

inate focus in theory and measurement on job satisfaction. On the other hand, more targeted emphases on affective experiential states and their changes over time have taken a more central role in recent research on the way people relate to and experience their work.

A Century of Job Attitudes Research

Because the *Journal of Applied Psychology* is arguably the most important journal in work and organizational psychology, it is an excellent lens through which the field of job attitudes research has evolved. Parts of the history have been driven by changes in psychology in general, parts have been driven by concurrent social issues, and parts have been driven by the normal processes of scientific progress including changes in our paradigms. We have structured our summary in terms of major research topics and tried to characterize the main themes of each.

Our epochal representation appears in Table 1. Using an epochal framework to summarize a century of research assumes discontinuities. Kuhn (1962) argued that a paradigm shift occurs when anomalies observed during one period cannot be explained until the subsequent period provides new advancements. Thus, the ending of any period or epoch does not imply a refutation of prior research, but rather, a progression that builds upon the contributions of the earlier periods.

Epoch 1: War Era (1915–1945)

As with most areas of psychology, this was an incipient period in which job attitudes were covered in a diffuse, sporadic, and indeterminate manner. Indeed, the first empirical study on job satisfaction published in the *Journal of Applied Psychology* was authored by none other than E. L. Thorndike (1917), who observed that the monotony of grading printed compositions took a greater toll on the *satisfyingness* of the task than on performance (employees performed as well at the end of a 2-hr period as they did early on, but found the activity much less satisfying). Still, the organized area of study began in earnest in the late 1920s and 1930s, a decade after Thorndike's article, and was greatly influenced by the industrial and employment crises of the depression. Early in this period, research was rich with discussions of affect, attitudes, and personality. Methods were varied and eclectic. By the end of the period, a narrower paradigm had taken hold, one that would last for decades.

In 1931, Fisher and Hanna published *The Dissatisfied Worker*. For Fisher and Hanna, chronic emotional maladjustments and disturbances were the primary causes of worker dissatisfactions, more so than work conditions. In case studies, Fisher and Hanna (1931) talk of such reactions as not liking a supervisor or desiring to quit as "suggesting a need for psychiatric attention" (p. 225). Viteles (1932) devotes a full chapter in his textbook on Industrial Psychology to Fisher and Hanna, stating "one half of the amount expended annually on labor

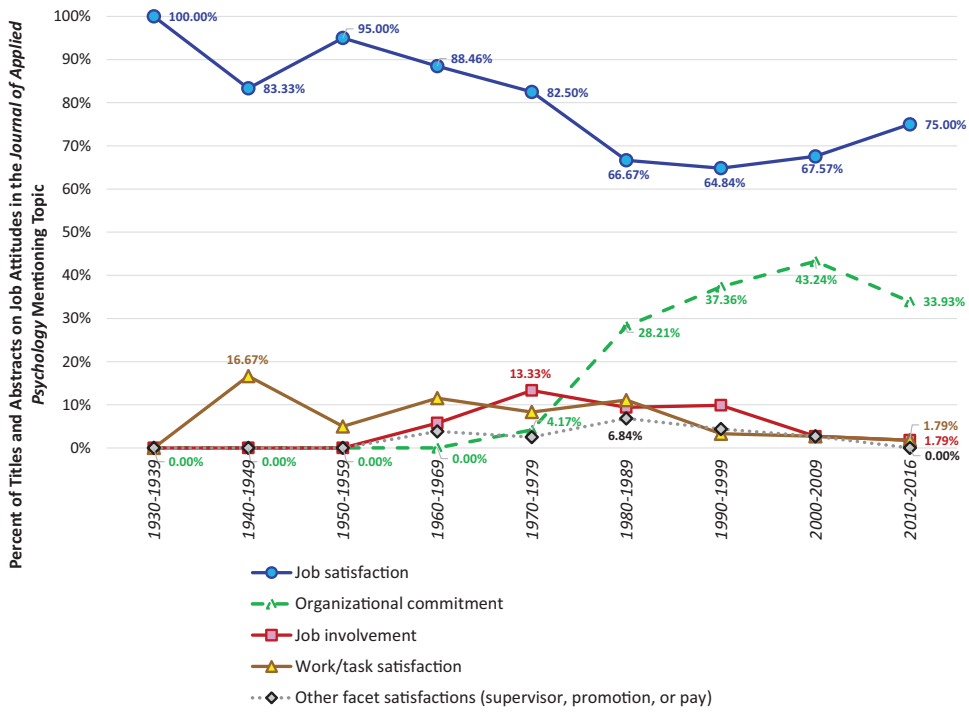

Figure 2. Proportion of all articles per decade in the PsycINFO database concerning different job attitudes over time limited to the *Journal of Applied Psychology*. All percentages for job satisfaction and organizational commitment are shown. For the other attitudes, only the peak decade and most recent percentages are shown. In some cases, percentages total more than 100% because of multiple attitudes mentioned in the same article. See the online article for the color version of this figure.

turnover is spent on the replacement of emotionally maladjusted workers" (p. 589). This research presaged the role of both dispositions and affect in the formation of job attitudes. In 1932, Hersey published *Workers' Emotions in Shop and Home*. Four times a day, over periods of weeks, railcar repair workers were asked to respond to an emotion checklist. This data was supplemented by daily measures of performance and physiological reactions. Without the aid of modern technology or statistics, Hersey attempted to assess daily within-person variations in affective states and their relation to performance.

Table 1
Epochs in Job Attitudes Research

Epoch	Denotation of era	Highest intensity	Landmark studies
Epoch 1	World War Era	1915–1945	Thorndike (1917); Hersey (1932); Kornhauser and Sharpe (1932); Hoppock (1935)
Epoch 2	Postwar Era	1945–1960	Brayfield and Rothe (1951); Weitz (1952); Brayfield and Crockett (1955); McGregor, (1957); Herzberg, Mausner, and Snyderman (1959)
Epoch 3	Cognitive Era	1960–1980	Hulin (1966); Blood (1969); Smith, Kendall, and Hulin (1969); Locke (1969); Lawler and Hall (1970); Hackman and Lawler (1971); Wanous and Lawler (1972); Mitchell (1974); Locke (1976); Landy (1978)
Epoch 4	Behavioral Era	1975–1990	Porter, Steers, Mowday, and Boulian (1974); Mobley, (1977); F. J. Smith (1977); Bateman and Organ (1983); Smith, Organ, and Near (1983); Iaffaldano and Muchinsky (1985); Hulin (1991); Judge, Thoresen, Bono, and Patton (2001)
Epoch 5	Dispositional Era	1985–2000	Weiss and Adler (1984); Staw and Ross (1985); Staw, Bell, and Clausen (1986); Gerhart (1987); Arvey, Bouchard, Segal, and Abraham (1989); Judge and Hulin (1993); Judge, Locke, Durham, and Kluger (1998)
Epoch 6	Affective Era	1995–present	Organ and Near (1985); Brief and Roberson (1989); Weiss and Cropanzano (1996); Weiss, Nicholas, and Daus (1999); Brief and Weiss (2002); Ilies and Judge (2002); Miner, Glomb, and Hulin (2005)

Note. Landmark studies were chosen primarily based on citation impact, but also on the authors' judgment of the quality, impact, and importance of the work. Choice of epochs (epoch), labels applied to those epochs (denotation of era), and temporal range when a majority of the primary research was published (highest intensity) were similarly chosen based on the authors' judgment. Landmark studies are listed in chronological order (then alphabetical for those appearing in the same year).

Hoppock's (1935) work is often considered one of the early landmark studies of job satisfaction, with its groundbreaking focus on survey methods and correlates of satisfaction and dissatisfaction. However, both Hoppock's intentions and methods were quite different from the paradigm that was to develop. Hoppock was more interested in the societal implications of dissatisfaction than the business implications, rarely touching on later. Consistent with this objective, his desire was to provide a general sense of the level of dissatisfaction in the working population. Hoppock also used an eclectic array of methods, including surveys, interviews and daily diaries. In an evocative and memorable approach that would not be used today, pictures and biographies of many of the workers he interviewed appear in his book.

As noted previously, this early research was diverse in ideas and methods, in contrast with the main thread of research for the next five decades. How did this stew become the broth we know? Not being present at the time makes it hard to answer this question, but in our judgment, Kornhauser and Sharpe (1932) laid the groundwork for the more focused paradigm to come. This work emphasized the use of questionnaires to ask about facets of job satisfaction and employed statistical techniques to assess relationships. Studies began to employ a more descriptive approach related to very specific issues, summarizing basic statistical evidence on job attitudes of department store employees (Kolstad, 1938) or reporting the percentage of employees satisfied with their jobs by occupational level (Super, 1939). While these studies had the advantage of ostensible scientific objectivity, generalizability and theoretical development were consigned to minor roles. It took several decades for theory and statistical techniques to catch up with the insights of other researchers in this early era.

Epoch 2: Postwar Era (1945–1960)

The postwar years were exemplified by a push to apply the pragmatically oriented technologies developed during the war to the private sector. For example, Strong's (1943) *Vocational Interests of Men and Women* demonstrated that future occupational satisfaction could be predicted by the "match" between a person's vocational interests and those of people engaged in the occupation. It was also during this time that researchers' attention turned to the outcomes of job attitudes, particularly turnover (e.g., Weitz & Nuckols, 1955) and job performance (e.g., Brayfield & Crockett, 1955). In a methodological development, Kunin (1955) reported on a novel symbolic rating scale, the Faces Scale, which he used to gauge job satisfaction.

Weitz (1952) researched affective dispositions, asserting that because some individuals are prone to have more generally negative attitudes, "the number of dissatisfactions with the job should be placed in its proper background—namely, some 'gripe index' of the individual" (p. 202). He found a strong positive correlation between the "gripe index" and job dissatisfaction. Weitz also linked affective dispositions to the attitude–behavior relationship, noting that dissatisfied employees who scored high on the gripe index were less likely to quit than those who scored low. Weitz speculated that this could be because individuals with a chronically negative perspective also have negative attitudes toward alternative jobs. Measurement of components of satisfaction also began, though several influential efforts still conceptualized job satisfaction as a unitary construct (Brayfield & Rothe, 1951; Kunin, 1955). The Kunin and Weitz studies illustrate the often intimate tie between psychologists working in organizations (Kunin was an organizational consultant; Weitz was a researcher in the life insurance industry) and the research published. Though that link still exists, it seems much weaker now than it was then.

Early need fulfillment and humanistic models of job satisfaction were offered by Morse (1953); Schaffer (1953), and McGregor (1960). Exemplifying this approach, McGregor argued that managers could enhance employee satisfaction and productive engagement by providing opportunities to fulfill universal human needs for self-actualization. Earlier, he argued that management essentially consisted of "a process primarily of creating opportunities, releasing potential, removing obstacles, encouraging growth, providing guidance" (McGregor, 1957, p. 207). The primary means of doing this was to enlarge jobs, allow employees to participate in decision-making, and to encourage self-direction rather than extensive use of control systems. The Institute of Human Relations at Yale further developed these ideas, with an emphasis on task characteristics as a determinant of affective reactions to a job (e.g., Walker & Guest, 1952). Hackman and Oldham's (1975) job characteristic model can be traced directly back to this work.

Probably the most influential work of the period was reported by Herzberg, Mausner, and Snyderman (1959). They asserted that the factors that cause positive job attitudes are different from the factors that generate negative attitudes. Subsequent research from the cognitive era cast serious doubts on the merits of this assertion, ultimately leading to the near disappearance of Herzberg's ideas in mainstream discussions of satisfaction or affect. However, as noted by Weiss and Cropanzano (1996), Herzberg's attention to the driving force of work events and his acknowledgment of real variability in affect levels would later be reflected in the affective era. Herzberg's two-factor theory was one of the more prominent theories during this time, but most direct tests of the theory soon thereafter were either unsupportive or equivocal (Ewen, 1964; House & Wigdor, 1967; Hulin & Smith, 1967; Soliman, 1970).

Epoch 3: Cognitive Era (1960–1980)

As was true with virtually all areas of psychology, the cognitive era represented a transformative shift in attitudes research. This transformation can be characterized by a few themes. First, the study of job satisfaction began to be organized around theories that linked quantifiable features of a job with more positive attitudes in mathematical representations, which we term a *calculative perspective*. The Cornell model of job satisfaction (Smith et al., 1969), for example, focused on standards for evaluating the worth of a job relative to alternatives. Other theories also exploited advancements in calculative attitudes research. Examples include value–percept theory (Locke, 1969), opponent process theory (Landy, 1978), and expectancy theory (Mitchell, 1974). While calculations of satisfaction based on extrinsic characteristics dominated this period, a durable model of intrinsic job satisfaction, the job characteristics models (Hackman & Lawler, 1971; Hackman & Oldham, 1976), also arose during this time period.

Second, job attitudes research became more interactional by incorporating individual desires via through computational processes. Locke's (1969) value–percept model, for example, posited that job satisfaction represented a have–want discrepancy across job attributes, moderated by the value or importance the individual

places on each attribute. Wanous and Lawler (1972) proposed and evaluated a similar model, subtracting "is now" scores describing the current job from "would like" scores describing an ideal job, with a positive attitude resulting from a low discrepancy between these scores. Empirically, this research proposed overall attitudes would be more accurately estimated by multiplying levels of facets of job satisfaction by the corresponding importance attached to each, as opposed to the simple summation of facet scores (Mobley & Locke, 1970). In other words, attitudes were believed to function something like a mental regression model—if satisfaction facets and their respective importance to an individual could be accurately measured, a precise individual level of overall satisfaction would be determined.

A third theme emerging in this era was a focus on how contextual factors—such as organizational structure (Porter & Lawler, 1965), organizational climate (Schneider & Snyder, 1975), or community characteristics (Hulin, 1966, 1969)—affect job attitudes. Demographic or background factors—such as age (Blood, 1969; Glenn, Taylor, & Weaver, 1977; Saleh & Otis, 1964), race (O'Reilly & Roberts, 1973; Weaver, 1978), gender (Blood, 1969; Hulin & Smith, 1964; Sauser & York, 1978), and employment status (Miller & Terborg, 1979)—also were studied more extensively, not only in their direct relationship to job attitudes but as moderating variables as well (Katz, 1978; Kavanagh & Halpern, 1977; Vecchio, 1980). Relationships among demographics and attitudes have been inconsistent across studies, and theoretical explanations for why such differences might occur were not common. From the vantage point of today, such demographic effects, to the extent they exist, seem to be reflections of other more proximal factors like job roles and human capital levels (though these differences too are fading as a function of demographics).

Epoch 4: Behavioral Era (1975–1990)

Partly as a result of the greater integration with social attitudes research, applied psychology research began to focus more systematically on the behaviors emanating from job attitudes. Additionally, there was a demand from practitioners to explain why a manager would care about job attitudes beyond an altruistic concern for the happiness of the workforce.

The link between job satisfaction and turnover garnered the most attention. Following the cognitive perspective, the decision to quit one's job was seen as a function of the perceived desirability of movement (i.e., dissatisfaction) and the perceived ease of movement. Theoretical models linking job satisfaction with turnover through a process of withdrawal were supported (Mobley, 1977). It was during this time period that research on organizational commitment burgeoned. As early work showed significant links between commitment and turnover (Porter et al., 1974), this variable came to occupy such a central place in turnover research that by the end of this era, meta-analyses placed it alongside job satisfaction as one of the two core attitudinal predictors of turnover (Carsten & Spector, 1987; Hom, Caranikas-Walker, Prussia, & Griffeth, 1992). Consistent with the late stages of the calculative view of attitudes, an "investment" model based on the internal calculation of expected benefits and costs of membership in an organization relative to alternatives was influential in the commitment literature (Farrell & Rusbult, 1981). Hanisch and Hulin (1990, 1991) expanded this area to emphasize the relationships between satisfactions and constructs of work- and job-withdrawal behaviors.

The relationship between attitudes and performance had a very long history, and the interest in behavior during this period generated more thorough investigations. Longitudinal studies proposed that it was not clear if satisfaction would increase performance, or if performing well was satisfying (Wanous, 1974). Others proposed that consideration of moderators like reward contingency and self-esteem would demonstrate that satisfaction could be linked to performance only in certain circumstances (Jacobs & Solomon, 1977). Despite these efforts to refine the satisfaction-performance link, the most influential study regarding job attitudes in this era was a meta-analysis showing weak correlations between satisfaction and performance (Iaffaldano & Muchinsky, 1985). This publication led to a widespread belief that increasing job satisfaction was unlikely to have much influence on behaviors related to task performance. At the same time, a new perspective on performance was beginning to emerge that would show that attitudes could be more closely linked to the discretionary helping and morale building behaviors characteristic of a "good soldier" (Bateman & Organ, 1983).

Other research linked job satisfaction to absence, with inconsistent results that tell us as much about the problems involved in studying isolated, low base rate criteria (Hulin, 1991) as the actual relevance of job attitudes for those criteria. In one noteworthy study—born from a joint product of serendipity and ingenuity, F. J. Smith (1977) found that salaried employees at Sears' headquarters who came to work on the annual survey day—braving a Chicago snowstorm in so doing—had significantly more positive job attitudes than comparable employees surveyed in the New York office.

Epoch 5: Dispositional Era (1985–2000)

As our earlier review revealed, that job attitudes partly reflect the dispositional make-up of the individual was recognized in the earliest eras of job attitudes research. Yet these studies were the exception rather than the rule from the postwar to the behavioral eras. While research on the situational antecedents of job attitudes had shown promise, new trait-based models of personality beginning in the 1980s signaled a possible alternative explanation for how job attitudes might arise.

Longitudinal studies of dispositions and attitudes, along with an integrative review by Adler and Weiss (1988), ushered in the dispositional era in attitudes research. Staw and Ross (1985) found that job satisfaction was reasonably stable over time, even when individuals changed employers or occupations. Staw, Bell, and Clausen (1986) further refined this idea by showing affective tendencies assessed during childhood showed impressive correlations with job satisfaction assessed at midlife. In a similarly provocative study, Arvey, Bouchard, Segal, and Abraham (1989) found significant consistency in job satisfaction levels among pairs of monozygotic twins reared apart from early childhood. Additional work showed that those who reported negative reactions to neutral objects on Weitz's (1952) questionnaire were also less satisfied with their jobs (Judge & Hulin, 1993; Judge & Locke, 1993). Levin and Stokes (1989) demonstrated that a negative affective disposition was related to lower levels of job satisfaction across varying task characteristics in both laboratory and field

settings. Soon thereafter, the publication of Digman's (1990) review of the growing body of research on the five-factor model of personality, in conjunction with Barrick and Mount's (1991) meta-analytic work showing the utility of these personality traits in predicting job performance, showed a way to increase the specificity of dispositional approaches. The consistent demonstration of the relevance of personality prompted a general consensus that five-factor model traits are a necessary consideration for understanding job attitudes (Judge, Heller, & Mount, 2002).

This era saw a growth in the sophistication of statistical models for theory testing. The growth of mediation models based on structural equation modeling fit well with the dispositional approach. For example, core self-evaluations (CSEs) were modeled as a predictor of perceived job characteristics, which in turn predicted job satisfaction (Judge, Bono, & Locke, 2000; Judge, Locke, Durham, & Kluger, 1998). Other structural models were developed that paired commitment and satisfaction with chains of behavior (Hom et al., 1992; Williams & Hazer, 1986). The use of meta-analysis as a tool for synthesizing and consolidating findings also expanded during this time period. Besides meta-analyses related to dispositions, the literature on job characteristics and job attitudes also received meta-analytic treatment, showing that these relationships were consistently quite large across samples (Fried & Ferris, 1987). Another comprehensive meta-analysis explored both antecedents and outcomes of organizational commitment (Mathieu & Zajac, 1990). Another influential study used meta-analysis to demonstrate that the relationship between job satisfaction and turnover was stronger during periods of low unemployment when jobs were plentiful (Carsten & Spector, 1987).

Epoch 6: Affective Era (1995–Present)

As with the general attitudes literature (Katz & Stotland, 1959; Schwarz & Clore, 1983), affect had long been part of definitions of job attitudes. The affective component of the experience of a job was central in early work (Hersey, 1932). Work during the cognitive era also included emotions in the definition of attitudes (Locke, 1969). Along similar lines, researchers have long defined commitment as a form of attitude best exemplified as an affective attachment to an object (e.g., Mowday, Porter, & Steers, 1982; O'Reilly & Chatman, 1986). However, with a few exceptions (Cranny, Smith, & Stone, 1992; Williams & Alliger, 1994), the affective property of job attitudes lay relatively inert. Over time, questions emerged about the exclusive reliance on explicit use of cognitive primes and comparative standards in measuring attitudes (e.g., Organ & Near, 1985).

The publication of affective events theory (Weiss & Cropanzano, 1996) ushered in a new era of research on emotions and attitudes. The reemergence of within-person measurement of job attitudes provided the methodological foundation for empirically studying job attitudes as fluctuating lawfully within-person and mood dependent. It became evident that a substantial proportion of job satisfaction variability was within-person, and, rather than wholly representing error variance, was predictable through the measurement of events (Weiss, Nicholas, & Daus, 1999). Moreover, behavioral variability was also linked to these variations in internal affective states (Miner, Glomb, & Hulin, 2005). This perspective has continued to grow and change over time, encompassing refinements to theory, statistical procedures, and measures that have continued to influence the evolution of the field.

Antecedents of Job Attitudes

Having reviewed the historical trends in job attitudes research, we now turn our attention to some of the underlying conceptual and theoretical factors for the major trends that have emerged. As we will see, our review for each theoretical tradition is not bound by time, because various features of humanist, calculative, dispositional, and affective theories have been present in all eras of job attitudes research. Considering these major paradigms helps to highlight how each theme has contributed to a total understanding of job attitudes over time.

Humanist Perspectives

For the humanist perspective, job attitudes result when each individual's needs for growth, development, and meaning are met by the conditions of work. Theories of job attitudes based on needs and values derived from humanist models were already in place during of the earliest phase of job attitudes research. The second edition of the *Journal of Applied Psychology*, in fact, contained an article "The Human Element in Business," which noted that a successful organizational psychology requires "a full understanding of man's (*sic*) physical normal desires and needs—his physical wholeness—it calls for a clear perception of the meaning of his larger life which brings him into relation with his employer and fellow workmen" (Metcalf, 1917, p. 175). Over time, the themes of the inherent human needs for growth and self-actualization would become prominent in several theories, as evident in major works by McGregor (1957) and Maslow (1965).

Echoing the importance of personal meaning in work, other research proposed that emotional responses to a job are a reflection of the correspondence between values and job features (Locke, 1969). Job characteristics theory retained features of the humanist model, noting that a satisfying job is seen as one in which there is a sense of achievement and meaning for doing work, with such meaning being provided by autonomy, task variety, task identity, task significance, and feedback (Hackman & Lawler, 1971; Lawler & Hall, 1970).

The social component of work was noted early on in the development of job characteristics theory (e.g., Hackman & Lawler, 1971), but then was largely bypassed until the beginning of the 21st century. In recent years, research has incorporated cooperation and social interactions in the appraisal of the work context (e.g., Morgeson & Humphrey, 2006). Meta-analyses show that interdependence, feedback from others, and social support relate to job attitudes at a magnitude that is similar to task characteristics (Humphrey, Nahrgang, & Morgeson, 2007). Antecedents of commitment have also been addressed from the humanist perspective, with commitment shown to be derived from considerate and supportive social relationships (e.g., Eisenberger, Fasolo, & Davis-LaMastro, 1990; Rhoades et al., 2001).

Critics have challenged vague terms like *self-actualization* and a tendency to assume humanist mechanism explained attitude formation without actually putting these assumptions to the test (Wahba & Bridwell, 1976). There are also concerns about the close correspondence between descriptions of job conditions val-

ued by humanists and the content of job attitudes scales. While explicit use of early humanist writers has waned, the core tenets have remained an underlying theme in theorizing. The emergence of the self-determination perspective in organizational research (e.g., Deci, Connell, & Ryan, 1989; Grant, 2008; Greguras & Diefendorff, 2009; Rich et al., 2010) has brought need-value theory back into focus as a significant theoretical component of attitudes research.

Calculative Perspectives

Standing in contrast to the intrinsic drives featured prominently in the humanistic perspective on job attitudes, calculative models are focused on specific cognitive processes underlying the positive and negative aspects of the work. These processes are embodied in a mathematical utility function. From the calculative perspective, job attitudes are caused by the correspondence between multiple outcomes the worker desires on the job and the actual features of the job. This approach does consider job content, like the job characteristics approach, but the underlying rationale is based on precise mental arithmetic. The Cornell model of job satisfaction (Smith et al., 1969) proposed that the utility one derives from a job is evaluated in terms of the effects of frames of reference (i.e., relative standards) on evaluations of job outcomes. The investment model proposes that commitment exists when the mental calculation of the benefits associated with a job exceeds costs (Farrell & Rusbult, 1981; Rusbult & Farrell, 1983).

Theories of job attitudes which focus on quantifiable causative elements do have advantages. Comparative levels of objective rewards have long been shown to be good predictors of satisfaction (e.g., Dyer & Theriault, 1976), even for those who do not believe they are particularly motivated by money (Jurgensen, 1978). Moreover, the calculative perspective is extremely general and can easily accommodate "enjoyment of the work" and "freedom to make decisions" as part of the calculation of utility. On the other hand, the calculative perspective suffers from circularity—if one engages in a behavior for any reason, post hoc models can be constructed to show that the choice was a result of utility maximization (Becker & McClintock, 1967). In other words, by being so general as to incorporate any needs into the utility function, calculative models do not offer any specific predictions (Herrnstein, 1990). Moreover, incorporating importance scores does not increase the correlations between facet scores and overall satisfaction (Blood, 1969, 1971; Ewen, 1967; Mikes & Hulin, 1968).

Dispositional Approaches

Unlike either the humanist or calculative perspectives, the dispositional perspective places the locus of job attitude formation in the worker him- or herself. Along with the attention to persistence of attitudes over time, the dispositional perspective emphasizes that some people have a generally positive or negative attitude across domains. The dispositional approach takes this concern on directly, showing that there are indeed reasons to believe that there are substantial underlying relationships between dispositional views of the world and job attitudes. Meta-analyses show that dispositional CSEs are substantially related to job satisfaction (Judge & Bono, 2001) and affective commitment (Chang, Ferris, Johnson, Rosen, & Tan, 2012). In both cases, CSE enhance one's appraisals of situations, whether they are characteristics of the job or the organization as a whole (Judge et al., 2000). This fits with a general model in which dispositions interact with the environment. There are also points of correspondence between dispositional and humanist approaches. Individuals with higher levels of CSE derive satisfaction by pursuing goals that are congruent with their dispositional values related to achievement (Judge, Bono, Erez, & Locke, 2005).

The dispositional approach does help to explain stability in job attitudes across time, even as job conditions change. However, there are concerns that these trait-based approaches overemphasize stability and fail to address within-person variation over time. This is likely an unprofitable approach, as few would dispute that an accurate model of dispositions integrates both persons and situations as they dynamically interact with one another (Pervin, 1989). Mood and event based approaches, which we cover next, take this interactive process as a central focus.

Mood and Event-Based Approaches

While the theories mentioned so far largely differ from one another in terms of the comparative emphasis on fundamental human needs, calculations based on monetary gain, or long-term internal dispositions, most have shared a common emphasis by predicting a person's attitude toward a job as a single score. However, there is substantial variability in job attitudes within the same individual over time. Two key drivers of within-person variability, as noted in affective events theory (Weiss & Cropanzano, 1996), include the flow of moods within an individual as well as the events the person experiences on a day-to-day basis.

Mood and event based approaches are intimately linked to work on dispositions. Individuals higher in negative dispositions are more likely to experience negative emotions which then spill over to negative appraisals of one's work, whereas those who are higher in positive dispositions attend to more positive features of their work (Connolly & Viswesvaran, 2000). However, there is substantial variability in moods over time. The return of repeated measures of affect in the workplace, coupled with new statistical techniques and psychometrically rigorous measurement, demonstrated that individuals varied significantly in satisfaction over time and that there were cycles of mood over time (Miner et al., 2005; Weiss et al., 1999). State-based positive affect is positively associated with job attitudes, and state-based negative affect is negatively associated with job attitudes (Thoresen, Kaplan, Barsky, Warren, & de Chermont, 2003).

The nature of one's affect toward the organization has been shown to have quite substantial variability within individuals (Dalal, Lam, Weiss, Welch, & Hulin, 2009). Commitment involves affect-laden concepts like values (Porter et al., 1974), and ongoing social relationships (Stevens, Beyer, & Trice, 1978). The affective component of commitment has exhibited the most significant relationships with organizational actions and employee behavior (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002; Solinger, van Olffen, & Roe, 2008). Time itself can be an important part of commitment. For example, individuals who plan on staying in an organization have been found to have a flat or positive trajectory of commitment over time, whereas those who leave are marked by substantial declines in commitment (Solinger, Hofmans, & van

Olffen, 2015; Kammeyer-Mueller, Wanberg, Glomb, & Ahlburg, 2005).

Outcomes of Job Attitudes

For many researchers, the relationship between job attitudes and behaviors are of central importance. The applied aspects of organizational psychology have been concerned with whether attitudes are related to tangible outcomes. Research in the broader area of social attitudes, as with research on job attitudes, found a weaker relationship between attitudes and behavior than was expected. Several theorists proposed why these relationships were so weak, including foundational work by Campbell (1963); Doob (1947); Hull (1943), and possibly most influentially for the field of organizational psychology, Fishbein and Ajzen (1972). These authors emphasize that there is a distinction between one's orientation between an object and the behaviors they will employ related to this object, exemplified in the theory of reasoned action and the follow-up theory of planned behavior.

A second distinction was drawn between the level of specificity in attitudes as predictors and behaviors, with the former being assessed at a very broad, general level of abstraction, whereas the latter are assessed at a much more specific level. As such, broad attitudes are not appropriate predictors of very specific behaviors. The correspondence principle says that if specific behaviors are to be predicted, specific attitudes toward that behavior should be investigated. As a result, Fishbein and Ajzen (1972) advocated the study of broad families of behaviors to correspond with broad measures of attitudes. Consistent with this finding, broad job attitudes are more closely related to multiple-act families of behavior compared to the relationship broad attitudes have with specific behaviors (Fisher, Locke, & Henne, 1992; Roznowski & Hulin, 1992).

Although attitudes research can find stronger relationships with behavior if they ask about attitudes toward behavior, this also tends to produce an infinite regress in prediction in which one can get ever greater correspondence between attitudes and behavior while measuring attitudes that become so narrow as to be meaningless in the broader domain of the actor's life (Dawes & Smith, 1985). The optimal degree of attitude specificity is clearly a complex issue, and is best determined by considering the specific research question.

Process of Adaptation and Withdrawal

Pure attitudes researchers propose that attitudes serve a functional purpose, directing one's motivation and attention toward desirable ends. Within the field of organizational psychology, this issue is covered in some depth by Mobley, Griffeth, Hand, and Meglino (1979) and by Hulin (1991). The adaptation process leads a person to approach situations associated with positive attitudes, and correspondingly withdraws from situations associated with negative attitudes. This serves as a unifying perspective for much of the work we review.

Prediction of Specific Criteria

The overall process of adaptation and withdrawal is manifested in a number of specific behavioral criteria. As the satisfaction-behavior literature matured, a concomitant rise in the understanding of dimensions of job performance provided a framework for classifying behavior. Consistent with prior work, we focus on categories of task, citizenship, and counterproductive performance (Rotundo & Sackett, 2002). Moreover, reflecting the special status of withdrawal in the job attitudes literature, we treat it separately from counterproductivity. *Withdrawal* behaviors are responses based on a negative appraisal of a situation, marked by a desire to avoid or alter the situation. As satisfaction and commitment are reduced, it is expected that a variety of disengagement activities will occur. The most substantive body of research on work withdrawal comes from the work of Hanisch and Hulin (1990, 1991). Similar to the correspondence principle, these authors propose that broad attitudes toward work will be the best predictors of broad classes of behavior, as opposed to single actions. Individuals with good employment alternatives will be likely to withdraw by taking an alternative job. Individuals without these options may enact withdrawal in the form of absence, while others who have more closely monitored schedules may fail to attend to their work tasks and psychologically withdraw while maintaining physical presence. Early retirement is also an option chosen by some dissatisfied workers (Hanisch & Hulin, 1990). In all of these cases, broad job attitudes should be more theoretically powerful predictors of the entire class of job behaviors than they would be as predictors of any specific act. An important and often overlooked tenet of this literature is that withdrawal is not valenced or normed; from an individual worker's perspective, many withdrawal behaviors may be adaptive (Hulin, 1991). What is adaptive and what is counterproductive often depends on one's perspective.

Commitment is a construct that was essentially tailor-made to predict withdrawal from the onset. This fit has been excessively close, obscuring attitudes and behavioral intents. It has been argued that two of the three dimensions of the three-component model of commitment do not reflect attitudes at all, but rather, are situational constraints that influence withdrawal decisions and processes (Solinger et al., 2008). Many items in popular organizational commitment inventories are clearly redundant with items in inventories measuring withdrawal cognitions (e.g., Bozeman & Perrewé, 2001).

The progression of withdrawal model implies that a decision to leave a job is the result of both one's level of job attitudes, but moreover, that a comparative deterioration in attitudes should accompany withdrawal decisions. As within-person modeling became more common in organizational research, researchers found that the trajectory of attitudes was an important part of the withdrawal process. Those who eventually leave their jobs are marked by progressively lower and lower levels of satisfaction and commitment (Bentein, Vandenberghe, Vandenberg, & Stinglhamber, 2005; Kammeyer-Mueller et al., 2005).

An events-based approach has shown that sudden emotional reactions can sometimes override the attitude system for withdrawal. In these cases, overall attitudes toward the job are less important than suggested by classic attitude theories. Instead, momentary emotional reactions can produce dramatic changes in affect and cognition that overwhelm or bypass general attitudes (Lee, Mitchell, Wise, & Fireman, 1996). At the same time, this research has also found that some of the dramatic events that elicit abrupt decisions to terminate employment are related to unexpected alternative job offers (Lee, Gerhart, Weller, & Trevor,

2008). A decision that one's job is suddenly not appealing when a superior alternative appears is perfectly consistent with the Cornell model of job attitudes (Smith et al., 1969).

Performance and productivity are responses related to appraisals of the work situation, marked by a desire to maintain and approach the situation. Brayfield and Crockett (1955) noted that earlier work implicitly assumed that workers will attribute satisfactory or dissatisfactory working conditions to the employer and will exert effort reflecting either gratitude or withhold effort reflecting resentment; this was a position they critiqued because it failed to establish a reason for this motivation. The investment model suggests that if a person appraises a job as superior to alternatives, he or she will make higher levels of reward investments to maintain membership and increase access to desirable future job rewards in that same organization (Farrell & Rusbult, 1981; Rusbult & Farrell, 1983). A more affectively based variant on the humanist model proposed that individuals who have attitudes indicative of support and value congruence with the organization will exert their best efforts on the job (Meyer, Paunonen, Gellatly, Goffin, & Jackson, 1989).

Meta-analyses clearly show that when different facets of job satisfaction are formed into composites, there is a notable corrected correlation of $r_c = .30$ between satisfaction and performance (Judge, Thoresen, Bono, & Patton, 2001). However, the causal structure of the relationship is not straightforward, because attitudes can be either the cause or consequence of performance. Success may be associated with greater satisfaction because doing well in a valued domain is self-reinforcing (Locke, 1965; Locke, 1970). Other work shows that performance-contingent rewards are especially effective in linking rewards and satisfaction (Cherrington, Reitz, & Scott, 1971). One meta-analysis of panel studies found that job attitude levels were associated with changes in future job performance, but performance levels were not associated with changes in future attitudes (Riketta, 2008). However, even this relationship may change, depending on features of the worker and work context.

Citizenship behavior involves creating a positive psychological environment in an organization and often also entails behavior that might be hoped for or even recognized in performance evaluations, but may not be specifically demanded of employees. During the 1980s, there was a dramatic growth in research related to these behaviors. This research was directly predicated on resolving disputes regarding attitudes and performance. Specifically, this research proposed that attitudes might not lead to carefully watched and easily monitored task behaviors; but if citizenship behaviors were taken into account, attitudes would emerge as a much more significant correlate of behavior (Bateman & Organ, 1983; Smith, Organ, & Near, 1983). Satisfaction with the social environment can facilitate altruistic citizenship, because people are more likely to help others toward whom they are positively disposed (Smith et al., 1983). Commitment to an organization's values can also enhance discretionary citizenship behavior (Meyer, Becker, & Vandenberghe, 2004).

Counterproductive behavior is a mirror image of citizenship behavior in that it reflects exceptional effort, but unlike citizenship behavior, it is an exceptional effort to either violate organizational norms or even actively harm the organization with no clear utilitarian self-benefit. Some counterproductive behaviors, such as stealing, can be attributed to a desire to enhance the self. However, counterproductive actions can also arise out of a desire to release or express strong negative attitudes toward an external agent such as a supervisor, coworker, or the organization as a whole (Robinson & Bennett, 1997). Meta-analysis shows that job satisfaction is substantially negatively related to unethical behavior at work (Kish-Gephart, Harrison, & Treviño, 2010). A negative cognitive appraisal of an object will most often simply result in withdrawal, but discrete emotions like hostility and anger predict more retaliatory behavior like counterproductivity (Judge, Scott, & Ilies, 2006; Lee & Allen, 2002).

Organizational effectiveness includes macrooutcomes of satisfaction and commitment, including customer service perceptions and performance, unit-level productivity and performance, unit-level withdrawal, and financial/sales performance. With regard to productivity and profit, an earlier meta-analysis across nearly 8,000 business units within 36 companies using the Gallup Workplace Audit found that overall job satisfaction positively predicted both unit-level profit and productivity, as well as customer satisfaction (Harter, Schmidt, & Hayes, 2002). Beyond also meta-analytically linking job satisfaction to customer satisfaction and customer service quality ratings at the individual level (Brown & Lam, 2008), a more recent and holistic meta-analysis drawing upon studies from the academic literature on collective job satisfaction found large relationships between job satisfaction and macrolevel outcomes including unit-level productivity, unit-level citizenship behaviors, unit-level withdrawal, and customer satisfaction (Whitman, Van Rooy, & Viswesvaran, 2010), also finding that unit-level OCB mediated the unit level job satisfaction-performance relationship. Less work has been conducted on the macrooutcomes of organizational commitment. However, some initial work suggests that commitment is related to meeting sales targets for bank employees (Benkhoff, 1997) at the individual level. Focusing on unit-level commitment, some research also suggests that it is related to reduced customer complaints and customer wait times across dispersed units of a public sector service organization (Conway & Briner, 2012).

Collective attitudes may act as mediators between collective psychological constructs (e.g., organizational climates) or human resource practices (e.g., high-performance work systems; Huselid, 1995) and macrolevel outcomes. For example, using meta-analytic structural equation modeling, unit-level attitudes were found to mediate the relationship between service climate and customer satisfaction (Hong, Liao, Hu, & Jiang, 2013). Additionally, internal (i.e., law and professional code) facets of ethical climate are related to collective citizenship behavior and financial performance, as mediated by collective organizational commitment (Chun, Shin, Choi, & Kim, 2013). Unit-level job attitudes have been shown to mediate the relationship between high-performance work systems and overall unit performance (Messersmith, Patel, Lepak, & Gould-Williams, 2011), financial performance (Gong, Law, Chang, & Xin, 2009; Piening, Baluch, & Salge, 2013; Sung & Choi, 2014), and customer satisfaction (Piening et al., 2013).

Research has also suggested reciprocal relationships between satisfaction and macro-outcomes. For example, Schneider, Hanges, Smith, and Salvaggio (2003) found evidence for a reciprocal, cross-lagged effect between overall satisfaction and both return on assets and earnings per share. Furthermore, there is a reciprocal relationship after 1-year between employee job satisfaction and customer satisfaction (Zablah, Carlson, Donavan, Max-

ham, & Brown, 2016). With regard to commitment, a reciprocal relationship between commitment and financial performance as well as customer satisfaction was found after introducing a 1-year time lag (Winkler, König, & Kleinmann, 2012). Regardless of the direct relationships between attitudes and macrooutcomes, some characteristics of unit-level attitudes may act as boundary conditions. For example, there is a stronger relationship between job satisfaction trajectory and unit-level turnover for units that have more variability in individual-level job satisfaction trajectories (Liu, Mitchell, Lee, Holtom, & Hinkin, 2012).

Future Research Directions

As the preceding review shows, job attitudes research has a long and complex history, and over time, a combination of theoretical and empirical developments has changed the way researchers understand appraisals of the work context. While offering future research directions, many of these emerging perspectives will revisit familiar themes that have appeared since the earliest days of the *Journal of Applied Psychology*, but in new and (to us) exciting ways.

The ongoing development of the affective perspective will generate opportunities to consider new ways that attitudes can be dynamically linked to performance. For example, Dalal et al. (2009) proposed that individuals who are in a positive mood will engage in activities to maintain this pleasant state of mind, enhancing motivation to engage in citizenship behaviors. Rothbard and Wilk (2011) found that positive affect at the start of the work day was associated with superior customer service behavior, consistent with the idea that positive affect enhances approach motivation and proactivity. Conversely, negative affect at the start of the work day was associated with lower levels of customer service behavior, possibly reflecting depletion. Such potential self-regulatory cycles create an interesting point for both contrast and consilience relative to longer-term striving for personal fulfillment and intrinsic motivation proposed in humanist models.

Much of the work cited so far regarding affect and performance only addresses generalized mood states, and may have different relationships when specific forms of satisfaction or commitment are incorporated into the theoretical models. The self-regulatory processes involved in attitudes will require independent theoretical development that ties together direct effects of moods and emotions with comparable consequences (Beal, Weiss, Barros, & MacDermid, 2005). For example, employees may undertake transient efforts to regulate their moods more than attempting transient efforts to better like their jobs. As such, it is not likely that one would engage in regulatory behavior to maintain a positive appraisal of one's job. If one has a positive appraisal of one's job in the moment, the decision to regulate effort may be a reflection of a desire to retain or leave the job, or perhaps may be mediated through a sense of reciprocity (i.e., if I am satisfied with my supervisor or organization today, perhaps I will increase effort during this day as a way of acknowledging this positive appraisal). Such reactions may be mediated through job affect, consistent with evidence that counterproductive behavior can arise as a result of the anger generated through perceptions of unjust treatment (Matta, Erol-Korkmaz, Johnson, & Biçaksiz, 2014). Alternatively, a feeling that a job is matching one's values may spur on greater effort consistent with humanist models of commitment, but again, it is not that one exerts effort to maintain a feeling about the job, but rather, the feeling about one's values being fulfilled that helps one draw on a well of intrinsic energy.

These ideas correspond to another potential future research direction. The existence of distinct positive and negative affect systems (Tellegen, Watson, & Clark, 1999), as well as increased investigation of approach and avoidance systems in motivation (DeShon & Gillespie, 2005; Payne, Youngcourt, & Beaubien, 2007), suggests that future research should also revisit the idea of positive and negative attitude systems. This would, in essence, be a partial return to Herzberg's notion of satisfiers and dissatisfiers, but with significantly updated theoretical and empirical bases. Cacioppo and Berntson (1994) proposed that attitudes may be represented in a two dimensional space that includes highly positive and highly negative attitudes sometimes existing simultaneously toward the same object, or attitudes which have low levels of both positivity and negativity. On the antecedent side, dispositional positive and negative affectivity may relate especially well to corresponding positive and negative components of attitudes. Personally fulfilling work characteristics may relate uniquely to positive job attitudes, whereas conflict and tension may relate uniquely to negative job attitudes. Turning to the link between attitudes and behavior, there are likely to be distinct outcomes from positive and negative attitudes, as suggested by the distinct approach and avoid motivational systems which may mediate these processes.

Consequences of attitudinal conflict, in which positive and negative evaluations of a job coexist, may be especially interesting. The exit-voice-loyalty-neglect model proposes that voice behavior is a possible consequence of employees who appraise an organization's fundamental mission positively, but appraise the organization's current practices negatively (Rusbult, Farrell, Rogers, & Mainous, 1988). While this specific form of addressing a conflict among attitudes is possible, other responses to conflicts within the attitude space should be considered. For example, how does one address a situation in which a supervisor produces both positive attitudes, because of the support he or she provides, and negative attitudes, because this support is often delivered with an element of undermining? What are the consequences for a worker who holds a job that produces positive attitudes because of the positive humanist features like meaning and interesting work, but which also produces negative attitudes because it incorporates low pay and low social status? As these two examples illustrate, there are many cases wherein contradictory attitudes toward the same object can strongly coexist.

Development of theory related to independent negative and positive attitude systems will require commensurate work in the area of measurement. Confirmatory factor analyses have long shown that "reverse-coded" questions create problems in establishing a single factor in attitude scales like the Job Descriptive Index (Harvey, Billings, & Nilan, 1985). Rather than treating this result as an indication of measurement error, measures could be designed to emphasize the theoretical meaning of this multidimensional structure. One solution may emerge through grounded theory methods, building up our understanding of the factors that fuel distinct negative attitudes, in a process that will culminate in more refined scales over time (Edmondson & McManus, 2007). Such work should yield many insights quickly as people are apt to describe elements of their work that they have uniquely negative

attitudes toward, and that have no corresponding positive antipode. On the other hand, the very nature of Likert scales requires respondents to place their attitudes in a bipolar attitude space, which has been an acknowledged weakness of this approach (Kaplan, 1972). New response modalities may be an alternative.

Another direction for job attitudes research can be found in situational moderation of the job attitudes-behaviors relationship. Although a recent meta-analysis demonstrated that situational strength reduced the job satisfaction-performance relationship (Bowling, Khazon, Meyer, & Burrus, 2015), more research needs to be carried out on job satisfaction and other attitudes that links them with personality, context, and behavior (Judge & Zapata, 2015). In a similar vein, cultural values may affect the press of the situations experienced in the work context. For example, Ng, Sorensen, and Yim (2009) found meta-analytic evidence that the job satisfaction-performance relationship was reduced in collectivist cultures, given the normative press to contribute to the group, despite satisfaction or dissatisfaction. Future research should seek to examine additional situational characteristics beyond cultural values (Ng et al., 2009), aspects of situational strength (Meyer, Dalal, & Hermida, 2010), and trait activation (Tett & Burnett, 2003) as they moderate job attitude validities—as well as those situational characteristics in combination—potentially when they are at odds with one another (e.g., competing situational constraints and expectations).

Additional research may also examine the effect of context and situation on the unfolding of the "microstructure" of job attitudes (e.g., Solinger et al., 2015). Although Solinger et al. (2015) focused only on organizational entry and exit, future research should examine the extent to which various situations in organizations (e.g., mistreatment, promotion, feedback, empowerment, conflict, praise, etc.) at varying levels of strength and press affect both affective, cognitive, and behavioral trajectories of attitudes. In turn, commonly encountered situational moderators of the effect of these microstructure components on behavior should be examined. Similar logic can be extended to narrow characteristics of job attitudes including attitude strength (Krosnick & Petty, 1995; Schleicher, Smith, Casper, Watt, & Greguras, 2015; Schleicher, Watt, & Greguras, 2004), accessibility, stability, certainty, ambivalence, and so forth (Cooke & Sheeran, 2004; Glasman & Albarracín, 2006; Kraus, 1995). Finally, given that work contexts should moderate job attitude and behavior relationships, they may also affect the clustering of attitudes between-individuals. As such, profiles of job attitudes in various work contexts and work arrangements should be explored. For example, one study found commitment profiles toward different targets (i.e., profession, organization, job, supervisor, etc.) varied as a function of whether or not employees were in a standard or fixed-term (contract) arrangement (Cooper, Stanley, Klein, & Tenhiälä, 2016). In sum, there are a variety of future avenues for examining the situational moderation of the job attitudes-behaviors relationship.

Attitudes research in organizations can also be advanced through organizational neuroscience (Becker, Cropanzano, & Sanfey, 2011; Lee, Senior, & Butler, 2012) and behavioral genetics (Arvey & Bouchard, 1994; Ilies, Arvey, & Bouchard, 2006) in organizations. Behavioral genetics mediated models that link genes, individual-differences variables, and job attitudes with behaviors can help advance our understanding of the formation of job attitudes in part from our dispositional tendencies. For example, prior research has shown that there is a genetic component to job satisfaction (Arvey, McCall, Bouchard, Taubman, & Cavanaugh, 1994; Judge, Ilies, & Zhang, 2012) and that genetics account in part for the relationship between CSEs and health problems, as mediated by job satisfaction (Judge et al., 2012). Furthermore, molecular genetics studies can help isolate specific genetic effects on job attitudes to assist in explaining their heritability, contributing to our understanding of job attitudes—with the implication that genetic factors are only a "piece to the puzzle" of accounting for variability in job attitudes, along with situational factors (Spain & Harms, 2014). For example, a dopamine receptor gene (DRD4 VNTR) and a serotonin transporter gene (5-HTTLPR) were found to be significantly related to job satisfaction, with pay level mediating the relationship (Song, Li, & Arvey, 2011).

With regard to organizational neuroscience, the approach has been a point of contention between critics, optimists, and realists alike (Ashkanasy, Becker, & Waldman, 2014; Healey & Hodgkinson, 2014; Lindebaum, 2016; Lindebaum & Jordan, 2014; Spector, 2014) and is not without its limitations, caveats, and unsolved problems (Adolphs, 2015; Lee et al., 2012; Schwartz, Lilienfeld, Meca, & Sauvigné, 2016). Although we are critical of the extent to which organizational neuroscience can be considered as *deus ex machina* for organizational behavior research, we do believe that these neurobiological factors are not "prime determinants but rather . . . biophysical roots on which purposive human activity draws in tandem with other social, environmental and technological resources" (Healey & Hodgkinson, 2014, p. 784).

Beyond a mere understanding of the neurobiological and genetic bases for job attitudes, taking an organizational neuroscience approach in this area could potentially lead to therapeutic benefits, improvements, and enrichments in the lives of employees (Senior & Lee, 2013). How and where can organizational neuroscience methods be applied to the study of job attitudes? First, organizational neuroscience methods can be used to test theories developed regarding attitude formation and change as applied to organizations. For example, the iterative reprocessing model (Cunningham, Zelazo, Packer, & Van Bavel, 2007) suggests that attitudes exist as current evaluations built from attitude representations—current evaluations shift as a function of the iterative processing of new information, suggesting both stable and dynamic components of job attitudes. Current simulation research provided support for the iterative reprocessing model for racial stereotype perceptions and change as well as suggests future application of electroencephalogram and functional MRI methods for testing the model with human subjects (Ehret, Monroe, & Read, 2015). Second, neuroscience methods (for a list of techniques see Senior, Lee, & Butler, 2011) are becoming increasingly tractable owing to advances in technology, making them more amenable for research in organizational settings (Waldman, Wang, & Fenters, 2016). An additional benefit to using these methods, is that traditional methods used to investigate implicit attitudes (e.g., the Implicit Association Test) cannot be used when an employee is engaged in another task (Volk & Köhler, 2012). The combination of neuroeconomic games as manipulations, neurological assessments, and job attitudes measures can perhaps bring the neurobiological study of job attitudes to light in organizational behavior research.

Summary and Conclusions

Looking back at a century of work on job attitudes in the *Journal of Applied Psychology* and the field of industrial/organizational psychology as a whole, the most consistent theme appears to be a circle. Each progressive generation puts forward theories that challenge the assumptions of the last, with new methodological tools that are necessary to refine the scope and precision of the answers researchers can provide or even address in a rigorous way new, evolving, questions. While our review of the past century of research inevitably uses a contemporary perspective to make sense of the past, taking stock of the yield produced by past research allowed us to develop ideas for future research that we hope prove of value to the field. If anything, recent years have recovered some of the early interest in emotions and affect that were present at the dawn of applied psychology, and even long discarded Herzbergian theories that distinguish satisfaction and dissatisfaction into distinct poles have some similarity to the poles of positive and negative affective appraisals (Brief, Butcher, & Roberson, 1995).

A related theme has been a tendency for writers to vacillate around opposing points of view, reminiscent of Hegel's idea of dialectics in reasoning (Hegel, 1812; Popper, 2002). Each theoretical thesis comes to be contrasted with its antithesis. The earliest periods allowed for a variety of perspectives that were immense in their diversity (Hoppock, 1935); but as theories came to make more specific predictions and as methods grew in sophistication and precision, dialectical rifts began to appear. Humanist perspectives, with their inherent emphasis on subjective and internal factors evaluated in highly idiosyncratic ways, were contrasted with calculative models that focused on objectively observed job conditions that could be combined in well-defined equations. These approaches, based on assumptions of rationality and coherence in attitude formation, contrast with affective approaches that demonstrate a significant impact of flows of mood and emotion on attitudes. Content perspectives, which highlighted the importance of job and organizational features as predictors of job attitudes, were contrasted with dispositional perspectives that emphasized the role of personal characteristics that affected job attitudes independent of external conditions. Dispositional perspectives also emphasized enduring patterns of job attitudes, but ultimately came to contend with significant variability within individuals. Finally, a methodological preference for parsing attitudes has competed with an alternate perspective in which general attitudes regarding the job as a whole exist that are distinct from a combination of constituent satisfactions.

In the end, the successful conclusion of debates across schools of thought is the generation of a unique and generative extension of theories. For example, true progress in reconciling perspectives is not finding significant regression coefficients for both traits and job context factors in predicting satisfaction. Instead, true progress involves developing new models that explain the mutual influence of persons and situations. Perhaps this is clearest in the rapprochement between dispositional and affective approaches. Dispositional neuroticism and CSE influence emotional processing that is acknowledged in affect-oriented research (Weiss et al., 1999), while dispositions partially influence job attitudes through tendencies toward affective states (Judge & Larsen, 2001). The content approach also came to recognize that dispositional characteristics influence the capacity of individuals to access and benefit from various job conditions (e.g., Morgeson & Humphrey, 2008), whereas the dispositional approach recognized that dispositions influence attitudes through perception of job characteristics (Judge et al., 1998). As in the past, the future of job attitudes research can be expected to ultimately follow an arc of continued progress in which different threads of the literature recognize, at times abrade against, and in the end integrate with, one another.

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