Chapter 9

JOB SATISFACTION: DISPOSITIONAL AND SITUATIONAL INFLUENCES

Richard D. Arvey, Gary W. Carter and Deborah K. Buerkle

Industrial Relations Center
The University of Minnesota
USA

What are the determinants of job satisfaction? Intuitively, it seems that facets of the job environment, individual or person factors, and the fit between job facets and person factors should all influence the general attitude an employee holds toward his or her job. From a historical perspective, the Lewinian model suggests that behavior and attitudes are a function of both person and environmental factors [B = f(P, E)]. While few scholars would discount this broad functional relationship, recent discussion and research suggests debate concerning the relative importance of these two broad domains as causes and correlates of job satisfaction.

In this chapter we:

1. Discuss research streams providing evidence concerning the impact of person and situational factors on job satisfaction;
2. Discuss methods which have been used in attempts to untangle the joint influence of person and situational factors on job satisfaction;
3. Discuss potential research directions, and methodological issues relevant to this domain of inquiry.

We should note at the outset the limitations of this presentation. First, we limit our discussion to general or overall satisfaction. We do not deal here, except tangentially, with the problems and issues associated with facet satisfaction or with the relationships between job facet satisfaction and overall or general satisfaction. Second, we make no claim to be comprehensive in our discussion. Instead, we intend the discussion to be illustrative and conceptual. We adopt the perspective that the term 'situational' factors refers to variables...
and constructs which are predominately associated with the job, the job environment, the job climate, organizational factors, and other 'non-person' factors. Similarly, we classify constructs such as 'dispositions' and traits as person factors.

In the sections that follow, we discuss four major research models which have been followed by researchers studying the causes and correlates of job satisfaction. The first model includes studies examining associations between specified psychological individual difference variables and demographic variables (e.g. personality, values, gender, age, etc.) and job satisfaction. We call this the specified person effects model because it is characterized by the identification and measurement of variables having a relationship to satisfaction. The second model subsumes studies examining associations between specified situational variables and job satisfaction (the specified situational effects model). Researchers conducting these studies identify and measure aspects of the job environment, and examine relationships between these environmental measures and job satisfaction. The third model, the interactional model, includes research examining the fit between person variables and situational variables, as well as studies positing dynamic interactions between person variables and situational variables. Finally, the fourth model involves the study of the influence of unspecified person variables on satisfaction. That is, it includes studies employing methods which can provide evidence of person effects without necessarily specifying the nature of the person influences involved. Studies of the stability of responses to satisfaction questionnaires over time and studies examining genetic influences on satisfaction are subsumed by this model.

THE SPECIFIED PERSON EFFECTS MODEL

The specified person effects model includes studies treating relationships between specified person variables and job satisfaction. Most researchers embracing this model have employed correlation or regression to determine the amount of variance accounted for by person variables, and have assumed that the direction of causality runs from person variables to satisfaction. However, some authors (e.g. Kornhauser, 1965) have assumed the opposite causal pathway, that is, that person variables (such as mental health and personality) are primarily influenced by satisfaction and not vice versa.

Two major classes of variables comprise the 'person variables' category—psychological individual difference variables, and demographic variables. It is important to draw a clear distinction between these classes of variables because demographic variables, theoretically, can only influence satisfaction through their influence on situational variables and/or psychological individual difference variables. For example, it is frequently found that satisfaction increases with
With the job, the job, and other ‘non-personal’ dispositional traits as research models which assesses and correlates of job satisfaction associations between demographic variables and satisfaction. We call this identified by the identification of job satisfaction. The second model specified situation exposure effects model, includes environmental variables and situational variables. Each person variables and solves the study of the ion. That is, it includes dence of person effects on influences involved. Questionnaires over time on are subsumed by this

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on variables' category—demographic variables. It is sses of variables because satisfaction through individual difference tisfaction increases with age. Such increases could stem either from situational influences (e.g., older persons may obtain jobs with more desirable characteristics) or person influences (e.g., age-related changes in personalities or aspiration levels).

While relationships between measures of psychological differences and satisfaction have received increased attention in the past few years (e.g., Staw, Bell, & Clausen, 1986; Watson, Pennebaker, & Folger, 1987; Watson & Keltner, 1989; Levin & Stokes, 1989), such relationships have been discussed in the satisfaction literature for many years. In fact, most early conceptions of morale and of work adjustment, from which research in job satisfaction stemmed, were inextricably linked with conceptions of psychological adjustment and personality. As early as 1931 Fisher & Hanna (p. 27) stated:

... a large part of vocational maladjustment and industrial unrest are secondary to, and but a reflection of, emotional maladjustment. . . . His maladjustment, whatever it relates to, breeds within him dissatisfaction and thwarts him in his search for happiness and success. Inasmuch as his feelings and emotions are inherent aspects of himself, he carries them with him, so to speak, into every situation which he enters ... it is not surprising that he very frequently attaches or attributes it (his dissatisfaction) to his work or his working situation.

Over the years, researchers have established that job satisfaction is significantly associated with general mental health indices (Kornhauser, 1965; Kavanagh, Hurst, & Rose, 1981; Kasl, 1973), and with several personality variables, including locus of control (Spector, 1982), neuroticism (Capin, 1986; Furnham & Zacherl, 1986; Perone, DeWaard, & Baron, 1979) and positive and negative affectivity (e.g., Watson & Keltner, 1989; Levin & Stokes, 1989).

One particularly promising area of specified person effects research entails the examination of relationships between positive and negative affectivity and satisfaction. Positive and negative affectivity are basic, pervasive personality dimensions which arise repeatedly in measures designed to tap a variety of personality constructs and which are strongly related to major dimensions of mood (Watson & Clark, 1984; Tellegen, 1985). Positive and negative affectivity ‘index the strength of the individual’s disposition to experience, respectively, pleasure and pain, reward and punishment, self-enhancement and self-impediment, and to behave and think in ways that are conducive to these experiences’ (Tellegen, 1982, p. 3).

A few researchers (e.g., Brief et al., 1988; Watson & Keltner, 1989; Levin & Stokes, 1989; George, 1990) have demonstrated significant relationships between these variables and job satisfaction.

Staw, Bell & Clausen (1986) found significant relationships between a composite of pair items that appears to have been a measure of negative affectivity, and job satisfaction, even when the job satisfaction data were
collected almost 50 years after the dispositional data. A correlation of 0.34 was found between affective disposition in early adolescence and overall job attitude in late adulthood.

Levin & Stokes (1989) conducted both a laboratory study and a field study to examine relationships between negative affectivity and satisfaction. In the laboratory study, Levin and Stokes employed 140 subjects scoring the upper or lower quartile in an administration of the Negative Affectivity Scale (Stokes & Levin, 1989). Levin and Stokes found that subjects low in negative affectivity reported higher satisfaction with both an enriched and an unenriched task. In the field study, Levin and Stokes found a correlation of -0.29 between negative affectivity and scores on the Job Descriptive Index Work Itself Scale (Smith, Kendall, & Hulin, 1969) among 315 employees of a professional services firm. Levin and Stokes also found that a portion, though not all, of the relationship between negative affectivity and satisfaction could be explained by differences in perceptions of job characteristics. However, it is unclear whether persons differing in negative affectivity perceived similar jobs differently, or whether they held jobs with objectively different job characteristics.

In addition to research designed to explore relationships between psychological individual difference variables and job satisfaction, the specified person variables category encompasses a relatively large body of research examining relationships between demographic variables (such as education, age, and gender) and job satisfaction. Unfortunately, many researchers attempting to explain relationships between demographic variables and job satisfaction have used questionable and convoluted statistical analyses, and have explained their results so poorly that it is virtually impossible to determine whether their conclusions are justified. As a result, a significant portion of the research literature intended to explain relationships between demographic variables and job satisfaction is uninterpretable.

A modest positive association between education and job satisfaction has typically been found when the samples studied include a broad occupational range and when rewards are not held constant (Quinn & Baldi de Mandilovitch, 1977). This relationship has been shown to be nonlinear in some cases, indicative of a credentials effect (Quinn & Baldi de Mandilovitch, 1977). This positive association appears to be primarily attributable to increases in job rewards and quality of employment (including financial rewards) with increases in education. When samples including narrow occupational ranges are studied (e.g. Larsen & Owens, 1965), or when job rewards are held constant (e.g. Glenn & Weaver, 1982), the relationship between education and job satisfaction is usually nonsignificant or negative. Differences in values or frames of reference between persons of differing educational levels probably underlie such negative relationships.

The most consistent (though not universal) finding among researchers...
examining age-satisfaction relationships is that there is a positive relationship between age and satisfaction (Rhodes, 1983). There has been considerable debate regarding the form of this relationship, with researchers typically finding either a linear (Rhodes, 1983) or a quadratic (Kalleberg & Loscocco, 1983) relationship between age and satisfaction. Kalleberg & Loscocco (1983) found that a curvilinear model (with satisfaction increasing until middle age, then leveling off, and increasing again after about age 56) provided the best fit to the male sample of the 1972-73 Quality of Employment Survey data (Quinn & Shepard, 1974), while a linear model was most appropriate for the female sample. It is likely that age-related differences in rewards, values, and frames of reference all contribute to positive age-satisfaction relationships.

Unfortunately, research conducted thus far does not permit an assessment of the relative importance of these variables in accounting for age-satisfaction relationships.

Studies examining gender-job satisfaction relationships have shown no consistent gender-related differences in satisfaction, despite marked gender-related differences in job circumstances (Herzberg et al., 1957; Weaver, 1978; Campbell, Converse, & Rodgers, 1976). The underlying causes of this lack of differences are unclear, although they may reflect gender differences in both values and frames of reference.

THE SPECIFIED SITUATIONAL EFFECTS MODEL

An alternative research model is characterized by an emphasis on situational causes and correlates of job satisfaction. Many investigators conducting research subsumed by this model have taken the view that situational factors are largely responsible for job satisfaction. This view may have emanated from a broader behavioristic paradigm in psychology which questioned the scientific utility of dispositional constructs and concentrated solely on environmental contingencies or situational variables. Thus, researchers searched for, and found, a large number of external situational and contextual factors which are associated with job satisfaction. This emphasis on situational factors related to job satisfaction is evident in a number of influential streams of research, including the ‘human relations’ research stemming from the Hawthorne studies, and work design and redesign research.

Several investigators, including Payne, Fineman, and Wall (1976) and Schneider and Snyder (1975), have examined conceptual similarities and differences between organizational climate, a subjectively measured situational variable, and job satisfaction, a subjectively measured attitudinal variable. Payne, Fineman, & Wall (1976) conclude that job satisfaction differs from organizational climate in three important ways: first, the unit of analysis in measures of job satisfaction is the individual, while the unit of analysis in measures of organizational climate is the ‘social collectivity’. Second, the
element of analysis in measures of job satisfaction is the job, while in measures of organizational climate it is the organization. Third, job satisfaction measures are evaluative in nature, while measures of organizational climate are descriptive. Schneider & Snyder (1975) present evidence showing that, while correlated, measures of job satisfaction and organizational climate are empirically as well as conceptually distinguishable. For example, they show that the correlations between climate scores and job satisfaction scores were smaller than correlations among scores on different climate scales.

Researchers have also spent a large amount of time and resources investigating the impact of specific job characteristics on work attitudes and job satisfaction. Loher et al. (1985) reviewed 28 studies investigating relationships between job characteristics identified by the Hackman & Oldham (1976) Job Characteristics Model, and job satisfaction. Their results showed that, after correcting the observed correlations for statistical artifacts such as restriction in range, reliability attenuation, etc. the relationship between such subjectively measured job characteristics as task identity, task autonomy, skill variety, feedback, etc. and job satisfaction ranged from 0.24 to 0.34. Squaring these values yields estimates of the proportion of variance in job satisfaction accounted for by these variables: 0.05-0.11.

Another meta-analysis of the relationships between job characteristics and job satisfaction was reported by Fried & Ferris (1987). These researchers summarized the results of several studies, which included a total of about 20 samples. The mean correlations between various job characteristics and overall job satisfaction found by Fried and Ferris (1987) are shown in Table 1.

These results show, obviously, that facets of the job environment are associated with job satisfaction. Again, squaring these correlations suggests that these job characteristics individually account for between 4 and 9% of the variance in job satisfaction.

One criticism of the research associated with the Job Characteristics Model is that both the job characteristics data and job satisfaction reports are provided by job incumbents. That is, measures of the job environment are subjective,

<table>
<thead>
<tr>
<th>Job characteristic</th>
<th>Total sample size</th>
<th>Observed mean</th>
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<tbody>
<tr>
<td>Skill variety</td>
<td>18 035</td>
<td>0.29</td>
</tr>
<tr>
<td>Task autonomy</td>
<td>18 455</td>
<td>0.20</td>
</tr>
<tr>
<td>Task significance</td>
<td>17 887</td>
<td>0.26</td>
</tr>
<tr>
<td>Autonomy</td>
<td>7 861</td>
<td>0.34</td>
</tr>
<tr>
<td>Job feedback</td>
<td>18 561</td>
<td>0.29</td>
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job, while in measures of job satisfaction measures of climate are descriptive. That, while correlated, are empirically as well as conceptually, that the correlations are smaller than correlations.

Resources investigating the relationship between job characteristics and job satisfaction. Job Characteristics and Job Satisfactions is, after correcting the restriction in range, subjectively measured variety, feedback, etc., these values yielding coefficients accounted for by job characteristics and job demands. These researchers studied a total of about 20 characteristics and overall means in Table 1. Job environment and job satisfaction suggests between 4 and 9% of Characteristics Model reports are provided, and official reports are subjective.

Perceptually based measures provided by the same people who provide job satisfaction data. Thus, any observed correlation between these job characteristics and job satisfaction could be due to common method variance. Other researchers have focused on more objective features of job environments as potential correlates of job satisfaction. For example, Pritchard & Peters (1974) showed that there was a sizable relationship between job duties as defined by Position Analysis Questionnaire (PAQ) scores (McCormick, Jeaneret, & Mechem, 1972) and job satisfaction for over 600 US Navy personnel in a diverse set of jobs. The correlation between a PAQ composite measure of job duties and overall satisfaction was 0.46 for this sample. The multiple R-squared value (uncorrected for shrinkage) was 0.21, suggesting that the job itself plays an important role as a determinant of job satisfaction.

Another illustration of the role the job itself plays in accounting for variance in satisfaction is provided by a simple inspection of mean satisfaction scores across different occupations based on normative information for standardized job satisfaction measures. Table 2 provides means and standard deviations of general satisfaction scores measured via the Minnesota Satisfaction Questionnaire (MSQ) across six diverse occupations as reported in the MSQ manual (Weiss et al., 1967). These mean satisfaction scores range between 67.47 and 79.82 (about a full standard deviation difference). The omega-squared value computed using these data—representing the proportion of job satisfaction variance accounted for by occupation—is 0.11. (It is important to note that this variance may be due to the influence of the job environment on job satisfaction, from the influence of person variables which are also related to occupation (as a result of self-selection into occupations), or from the influence of both person and situational variables. However, a similar observation could

<table>
<thead>
<tr>
<th>Job title</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
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<tbody>
<tr>
<td>Engineers</td>
<td>77.88</td>
<td>11.92</td>
<td>387</td>
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<tr>
<td>Office clerks</td>
<td>74.48</td>
<td>12.45</td>
<td>222</td>
</tr>
<tr>
<td>Salesmen</td>
<td>79.82</td>
<td>11.82</td>
<td>195</td>
</tr>
<tr>
<td>Janitors/maintenance men</td>
<td>78.01</td>
<td>11.51</td>
<td>242</td>
</tr>
<tr>
<td>Machinists</td>
<td>75.71</td>
<td>11.52</td>
<td>240</td>
</tr>
<tr>
<td>Assemblers</td>
<td>69.78</td>
<td>11.41</td>
<td>74</td>
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<tr>
<td>Electrical assemblers</td>
<td>67.47</td>
<td>12.26</td>
<td>358</td>
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<tr>
<td>Total group</td>
<td>74.858</td>
<td>11.94</td>
<td>1718</td>
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Sums of squares between subjects = 32,394.41.
Sums of squares within subjects = 243,996.63.
Omega squared estimate = 0.114.
be made with regard to any person or situational variable measured in isolation.

Recently, a few researchers have employed structural equation modeling techniques in attempts to understand the nature of causal pathways linking situational variables with job satisfaction. James & Tetrick (1986), for example, tested three causal models relating job perceptions to job satisfaction, and found that only one of the models—the postcognitive-nonrecursive model—was not disconfirmed. The postcognitive-nonrecursive model specifies that job perceptions precede job satisfaction in the causal order, but that perceptions and satisfaction are reciprocally related.

The research literature exploring relationships between other environmental factors and job satisfaction is voluminous (see Locke, 1976 for a more comprehensive review). Obviously, we have summarised only a small portion of that literature. However, our limited review of the literature suggests that environmental variables influence job satisfaction in important ways, but that any single environmental factor does not explain a substantial amount of variance in job satisfaction.

While the majority of studies discussed thus far have included either person variables or situational variables, we do not intend to portray the impression that the satisfaction literature is devoid of studies which include variables from both categories. A large number of researchers have measured both individual difference variables and situational variables in studies of job satisfaction. In these studies, which frequently use a multiple regression or analysis of variance framework, the additive and unique variance in satisfaction accounted for by person and situational variables can be computed. A study conducted by O'Reilly & Roberts (1975) illustrates this approach. Subjects consisted of 578 US Navy enlisted men in a high-technology naval aviation unit. O'Reilly & Roberts (1975) obtained three measures of ability, measures of ten personality and motivational traits, measures of structural characteristics of the subjects' positions, and a measure of job satisfaction. Canonical correlation methods were used to show that when the variance in satisfaction accounted for by personality traits was partialled out, the structural variables were significantly associated with job satisfaction. However, no significant relationships were observed between personality and job satisfaction when variance accounted for by the structural variables was partialled out.

Another study following this approach is described by Colarelli, Dean, & Konstans (1987). They measured several person variables (i.e. cognitive ability, socioeconomic status, and career goals) as well as several situational variables (i.e. job feedback, autonomy, and job context), using a sample of 280 entry-level accountants. Their results showed that 9% of the variance in job satisfaction was accounted for by the person factors, 30% was accounted for by the situational factors, and 39% was accounted for by the joint additive effects of these sets of variables.
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An obvious advantage of measuring both situational and person variables in
job satisfaction studies is that the influence of the interaction between such
variables can be examined. These interactions form the basis for a third stream
of job satisfaction research which stresses the joint influences of person and
situational variables on satisfaction. Two avenues of research can be identified
which employ an interactional model. The first, the congruence stream, stresses
the importance of person–environment fit in explaining satisfaction, and the
importance of mechanistic (or static) interaction between persons and situations
(Weiss & Adler, 1984). The second research avenue, which has received little
empirical attention by job satisfaction researchers, stresses the importance of
dynamic interactions between persons and environments and of self-selection
into and out of job environments (Schneider, 1987).

The basic notion underlying congruence research is that people must fit their
jobs or that there should be some degree of 'congruence' between person
variables and situational variables in order for individuals to be optimally
satisfied, perform well, maintain tenure, etc. Most congruence research entails
the examination of differences in behavior and attitudes among persons
exhibiting different levels of congruence, or fit, between person characteristics
and job characteristics. Thus, the joint influences of person and environmental
factors operating interactively are considered to be of primary importance in
the production of job satisfaction (Terborg, 1981).

The Theory of Work Adjustment (Dawis & Lofquist, 1984) is among the
most well-known models positing the importance of person–environment
congruence on job satisfaction. A major tenet of this model is that job
satisfaction is a function of the correspondence between the reinforcer pattern
of the work environment and individual needs. Rounds, Dawis, & Lofquist
(1987) present a recent test of this model using multiple operational definitions
of ‘fit’ or congruence between job factors (occupational reinforcers) and
individual occupational needs (measured by the Minnesota Importance
Questionnaire (MIQ; Gay et al., 1971)). (The ‘needs’ measured by the MIQ
are simple preferences for various job characteristics.) Their findings revealed
that between 3 and 30% of the variance in general job satisfaction could be
explained by various congruence indices.

Holland (1973, 1985) introduced another congruence model which has
received a substantial amount of research attention. According to this model,
job satisfaction depends upon the congruence between personality and the
work environment. (Holland’s personality constructs are based on broad
interest composites and thus are closer to traditional conceptions of vocational
interests than personality.) Holland’s theory specifies that most persons and
most environments can be categorized as realistic, investigative, artistic, social,
enterprising, or conventional (Holland, 1985). Assouline & Meir (1987) present
a meta-analysis of 41 studies which have tested Holland's congruence hypothesis by correlating person–environment congruence with job satisfaction. Assouline & Meir (1987) report a weighted mean correlation of 0.21 between congruence indices and satisfaction.

Another well-recognized body of research emphasizing the importance of the interaction between person variables and situational variables in the production of job satisfaction is based on the Job Characteristics Model. The Job Characteristics Model proposes that the relationships between various job characteristics and behavioral/attitudinal outcomes are moderated by growth need strength (Kulik, Oldham, & Hackman, 1987). Loher et al.'s (1985) meta-analysis summarizes research examining this hypothesized interaction. After correcting for measurement unreliability, Loher et al. (1985) showed that the average correlation between a composite index of job characteristics (MPS—Motivating Potential Score) and job satisfaction was 0.68 among persons high in growth need strength, and 0.38 among persons low in growth need strength.

Equity and frame of reference models—two important theoretical frameworks relevant to satisfaction research—could also be seen, in a sense, as congruence models. Equity theorists argue that satisfaction is a function of the match between job rewards and a person's perceived equitable level of rewards (Adams, 1963). Likewise, according to the frame of reference model, satisfaction depends on the discrepancy between perceived job characteristics and an external standard of comparison (Motowidlo et al., 1976). The perceived equitable level of rewards and the external standard influencing satisfaction are almost certainly influenced by psychological individual difference variables and demographic variables (e.g. level of education). For example, Oldham et al. (1982) found that referents, or comparison others, used by employees in evaluating characteristics of their jobs tended to be similar to the employees in terms of education, skill level, seniority, and sex.

The 'fit' or congruence framework has received substantial attention in the vocational counseling literature. An entire issue of the Journal of Vocational Behavior in 1987 was devoted to conceptual and methodological issues associated with this general model. A number of issues have surfaced in this literature, concerning topics such as the appropriateness of various congruence indices, whether the 'right' person variables have been measured, whether the environment has been adequately sampled, etc. We discuss some of these issues below. However, one issue which deserves some attention here concerns the cross-sectional nature of the vast majority of research investigating person–environment interactions. Most studies are time bound in that subjects are 'nested' within particular situations or environments at one specific time. There may be a great deal to be gained by utilizing longitudinal designs (which are inherently more powerful statistically than cross-sectional designs) to investigate relationships between satisfaction and person and situational variables.
The importance of longitudinal designs is highlighted by studies stressing the importance of dynamic interactions and of the self-selection of persons into environments. For example, Pervin (1987, p. 225) stresses the need for 'dynamic, interpretive, process models that focus on ... the stasis and flow of behavior'. Schneider (1987) presents an attraction–selection–attrition (ASA) framework, which specifies that persons are attracted to and selected for job environments where they will 'fit', and that persons tend to leave settings where they do not fit. Moreover, Schneider (1987) asserts, the job environment is determined by the persons who are in an organization. Thus, not only is behavior a function of the person and the environment, as specified by Lewin, but environment is also a function of persons and behavior. Chatman (1989) presents a model based on the fit between individual value profiles and organizational value profiles which can be used to predict changes in behavior, norms, and values. Snyder and Ickes (1985) discuss a 'situational strategy' for examining social behavior. The situational strategy 'reflects the dynamic interactive perspective on personality and social behavior' (Snyder & Ickes, 1985, p. 933). One of the core features of the situational strategy is that 'properties of individuals (including stable traits, enduring dispositions, social attitudes, and conceptions of self) are reflected in the processes by which individuals choose to enter and to spend time in social situations and in the processes by which they influence the character of the social situations in which they find themselves' (Snyder & Ickes, 1985, p. 932).

The ASA framework, articulated by Schneider, and the related situational strategy, described by Snyder & Ickes (1985), have several important implications for job satisfaction research. First, by arguing that persons essentially create environments, including job environments, these theorists blur the distinction between person variables and situational variables (including both objective and subjective situational variables). For example, James et al. (1978, pp. 805–806) assert that '... many psychologically important situational variables, as well as individual variables, reflect reciprocal situation–individual interactions, and the measurement of variables representing one domain will often reflect, causally, the influences of the other domain'. Emmons, Diener, & Larsen (1986) go so far as to suggest that personality could be assessed by assessing situational choice. Second, self-selection into and out of environments can lead to attenuations in correlations between both person variables and situational variables and job satisfaction. Third, the ASA framework and the situational strategy offer potential explanations for correlations between certain individual difference variables and job satisfaction. For example, Snyder & Ickes (1985) discuss several studies providing evidence that persons actively gravitate toward situations congruent with their personalities. Thus, higher job satisfaction among persons high in positive affectivity (Watson & Keltner, 1989) may be due either to a tendency among such persons to evaluate any situation more favorably than persons low in positive affectivity, or to a
tendency for such persons to seek out or to create environments where there is a greater opportunity to experience positive affect. There has been little empirical research within the job satisfaction domain exploring the influence of dynamic person–situation interactions over time, or exploring the impact of self-selection on relationships between job satisfaction, person variables, and situational variables. Such research could be extremely valuable.

THE UNSPECIFIED PERSON EFFECTS MODEL

The unspecified person effects model includes studies employing methods which can provide evidence of person effects without necessarily specifying the nature of the person influences involved. Interestingly, by employing this model researchers can provide evidence of person effects without specifying the nature of the person effects involved, but must specify situational variables to rule out potential alternative explanations for apparent person influences. Two streams of research fall within this framework—research examining stability in responses to job satisfaction instruments over time and research examining genetic influences on job satisfaction.¹

Staw & Ross (1985) rekindled the debate over the importance of person variables in understanding job satisfaction when they noted that the situational aspects of job attitudes may have been overemphasized and that researchers could profit by adopting a ‘dispositional’ approach in explaining job attitudes and behavior. That is, individual characteristics predispose people to respond positively or negatively to job contexts and the influences of these individual characteristics on job attitudes have been underestimated. Staw & Ross (1985) conducted a study using data gathered on over 5000 men between the ages of 45 and 59 as part of the National Longitudinal Survey. Individuals completed a one-item satisfaction measure in three different time periods. Persons who had remained with the same employer were surveyed along with persons who exhibited a change in employer as well as occupation. These data revealed that there was substantial consistency in job satisfaction across the different time periods for individuals with the same employer and occupation (ranging from 0.37 to 0.48) and that this consistency in attitude was maintained, to some extent, even when persons changed employers and occupations. The correlation observed for persons who had changed both employers and occupations between the years 1966 and 1971 was 0.19; a composite index of satisfaction for 1966 and 1969 correlated 0.34 with the 1971 satisfaction measure.

¹Note that, while stability of satisfaction across time despite important situational changes provides evidence of dispositional influences, the lack of stability does not necessarily preclude dispositional influences. Trait influences produce behavioral coherence and thus behavior—or attitudes—should be predictable, but do not necessarily produce behavioral consistency (Weiss & Adler, 1984).
measure for these individuals. Staw & Ross (1985, p. 477) also found that neither pay nor job status was as good a predictor of job satisfaction as prior satisfaction level: 'Changes in pay did predict some variance when both employer and occupation changed, but the strength of its relationship with satisfaction was considerably less than that represented by prior work attitudes.'

Following up on the Staw & Ross (1985) research, Gerhart (1987) suggested that their results may have been influenced by the kind of sample used, potential unreliability of the measures, and possible restriction in range in the kinds of job changes experienced. Gerhart (1987) examined the youth cohort of the National Longitudinal Survey and used an independently derived measure of job complexity as an indicator of job change. While Gerhart's (1987) results replicated those found by Staw & Ross (1985) in that significant stability was found in levels of job satisfaction when individuals had changed both job and occupation, Gerhart (1987) found that situational changes accounted for a substantial portion of the variance in job satisfaction responses across time. Using regression analyses, Gerhart (1987) found evidence that both previous satisfaction and changes in the complexity levels of jobs over time predicted current job satisfaction. Thus, his analysis demonstrated that situational factors as well as dispositional or person factors predicted job satisfaction.

Another recent report of research in this area is provided by Gutek & Winter (1989). In one study, over 1000 employees in a financial institution responded to questions regarding their satisfaction with their current jobs and with the jobs they held two years previously (a retrospective measure). Subjects were categorized into those who had held the same job for the two years, those who had changed jobs, and those who had changed both jobs and companies. The correlations between job satisfaction measured in 1986 and the one-item retrospective measure of 1984 satisfaction for these three groups were 0.266, −0.084 (ns), and −0.091 (ns) respectively. Using the two-item satisfaction measure, the correlations between time one and time two satisfaction for the three groups were 0.246, −0.15, and −0.14 respectively. These last two correlations were significant at the 0.05 level; thus, time one satisfaction was significantly negatively associated with time two satisfaction for the latter two groups.

Gutek & Winter (1989) also report a second study using 582 employees from a number of organizations. Again, retrospective measures of job satisfaction were used and correlations between the time one and time two measures of job satisfaction for those individuals who had changed jobs and/or organizations were very low.

While the use of retrospective measures of job satisfaction in a cross-sectional study is problematic, the results of these studies are interesting in light of the results of Staw & Ross's (1985) study. It can be assumed that turnover frequently results from dissatisfaction and from the expectation that alternative
employment opportunities offer greater potential for satisfaction. When people pursue alternative job options, they often expect their satisfaction levels to increase. However, as discussed earlier, there also appears to be a personality-based tendency to be satisfied or dissatisfied across situations. Thus, studies examining the stability of satisfaction over time may be confounding influences due to dissatisfaction-based turnover and dispositionally based attitudinal stability.

USING TWIN STUDIES

Better control of the factors influencing job satisfaction might be achieved by utilizing identical and fraternal twins as subjects, and by examining the correlations between job satisfaction scores within twin pairs. Rowe (1987) suggests a variety of ways in which twin studies might be utilized within the context of the person–situation debate. To date only one study of job satisfaction has been conducted employing this type of methodology. We turn now to a review of this study.

Arvey et al. (1989) noted Staw & Ross’s (1985) suggestion that there might be a biologically based explanation for observed dispositional correlates of job satisfaction: ‘Job attitudes may reflect a biologically based trait that predisposes individuals to see positive or negative content in their jobs. . . . Differences in individual temperament ranging from clinical depression to a very positive disposition, could influence the information individuals input, recall and interpret within various social situations, including work’ (Staw & Ross, 1985, p. 471).

Following this suggestion, Arvey et al. (1989) used an unusual methodology to investigate whether biological or genetic factors are significantly related to job satisfaction. Their study involved the use of identical or monozygotic twins who had been reared apart (MZA) from an early age. Monozygotic twins reared together share the same genetic structure but also share a common environment; thus, it is difficult to separate genetic and environmental influences among twins reared together. While there are a variety of statistical procedures which permit estimations of the magnitude of such influences (usually in combination with fraternal or dizygotic twins), the use of monozygotic twins reared apart as subjects allows for more simple estimation procedures. Given the assumption of random placement with respect to any trait-relevant environments, the intraclass correlation computed between such pairs is a direct estimate of the genetic contribution to any measured variable.

The MZA twins participating in this study were part of a larger sample in the Minnesota Study of Twins Reared Apart at the University of Minnesota. Details of their recruitment and zygosity diagnosis can be found in Bouchard (1987). Thirty-four monozygotic twin pairs provided data for this study. These individual

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analogous to an R-squared value. To determine what a corresponding Pearson product-moment correlation would be, one must compute the square root of the 0.309 value, i.e. 0.55. A Pearson product-moment correlation between a variable and job satisfaction would have to be equal to or greater than 0.55 to be equal to or greater than an intraclass correlation of 0.309 in associative strength.

The second set of analyses conducted by Arvey et al. (1989) was designed to determine whether the twins sought out similar jobs and whether this job similarity could have been responsible for the significant job satisfaction heritability estimate. Arvey et al. (1989) found significant intraclass correlations for the job complexity, motor skills requirements, and physical demands of the jobs described. These data indicated that there was, indeed, a significant genetic factor associated with the kinds of jobs individuals seek and find. Subsequently, these job characteristics were partialled from the job satisfaction value and the intraclass correlation again computed to determine if a significant genetic factor still remained after these characteristics (the job environments) were controlled. The resulting intraclass value (0.289) changed very little and was still significant.

These data are quite provocative. They do, indeed, suggest that a biological component is significantly associated with job satisfaction. One way to look at the results of this study is to view the intraclass correlation as the correlation of job satisfaction between genetically identical people who happen to hold different jobs. In fact, one can use the data derived from the MSQ manual and shown in Table 2 of this chapter to obtain a feel for what these data mean. In Table 2 the mean square within subjects value reflects the amount of variation between different individuals who share the same job. This value is 142.60 (the corresponding standard deviation computed by taking the square root of this value is 11.94). The mean square within subjects value computed for the monozygotic twins which reflects the amount of variation between the twins in each pair across all twin pairs in the Arvey et al. (1989) study is 74.47 (SD = 8.63). Thus, there is less variability in job satisfaction between genetically identical people who hold different jobs than there is among genetically unrelated people who hold the same job.

There are several limitations associated with this study. First, it was based on a relatively small sample, so generalizations must be made with caution. Second, while the data demonstrate an association between genetic factors and job satisfaction, the genetically based dispositional tendencies were unspecified. Third, there is some concern for the precision of measurement of job characteristics—these measures were rather global and were measured at the occupational level rather than at the level of the positions held by subjects. A final point worth noting is that this interpretation of the intraclass correlation is based on the assumption that there is no genotype-environment interaction in these individuals worked, satisfaction.

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interaction. Thus, the estimates obtained reflect an additive model rather than an interactive model. However, to the extent that an interaction exists between individual genetic structures and the job environments in which the subjects worked, the intraclass correlation is an underestimate of the heritability of job satisfaction.

There has been a great deal of speculation concerning the mechanisms through which this genetic influence might operate. Arvey et al. (1989) suggest that the pathway might be through intelligence as well as through personality. Both intelligence and personality have been shown to be strongly influenced by genetics (Bouchard, 1987; Tellegen et al., 1988; Rushton et al., 1986). Another possible mechanism might be through work values: If job satisfaction is seen as a function of what individuals want and value in jobs compared to what they get (Locke, 1976), and if work values are partially genetically determined, then work values could be one mechanism through which genetics influence job satisfaction. Using samples of both monozygotic (n pairs = 23) and dizygotic (n pairs = 20) twins reared apart, Keller (1989) analyzed genetic influences on work values as measured by the MIQ. Her results demonstrated significant genetic influences on several central work values. A list of these values (with estimates of the contribution of genetic factors in parentheses) follows: achievement value (0.497), comfort value (0.318), status value (0.448), altruism value (0.156), safety value (0.399), and autonomy value (0.355). Thus, there seems to be some indication that work values could underlie genetic influences on satisfaction. However, specific linkages were not tested in the study reported by Keller (1989).

An important question which occurs within the context of these types of investigations concerns how much influence environmental interventions such as job redesign can have given that there may be a significant genetic component to job satisfaction. Both Staw & Ross (1985) and Arvey et al. (1989) suggest that there may not be as much plasticity among individuals as we might have once believed. For example, Staw & Ross (1985, p. 478) comment that: ‘The most straightforward implication is that many situational changes such as job redesign and organizational development may not affect individuals as they are intended. Many situational interventions may be prone to failure because they must contend with attitudinal consistency or a tendency for individuals to revert back to their basic dispositions.’

We are more sanguine than Staw and Ross about the possibility of effective environmental interventions. There are three factors which lead us to a more optimistic appraisal. First, even characteristics and traits which are highly genetically based (e.g. height, weight, etc.) can show considerable change given environmental interventions (Angoff, 1988). Second, the research results reported by both Arvey et al. (1989) and Staw & Ross (1985) are correlational in nature. These data simply show consistency across situations and not level
changes. Thus, while the rank ordering of individuals might be preserved on job satisfaction across situations, considerable level differences might be obtained. Third, while the study by Arvey et al. (1989) showed that a significant proportion of the variance in job satisfaction was associated with genetic factors (30%), a considerable amount (70%) was nonetheless attributable to other influences, including the job environment. Thus, there is a lot of room for 'play' in the measurement range. In sum, these lines of evidence do not tell us much about the potential impact of environmental interventions.

The unique features of twin designs make such designs immune to some of the confounding factors affecting more traditional designs used in job satisfaction studies. For example, twin designs avoid the potential confounding (mentioned earlier) between dissatisfaction-based turnover and dispositionally based attitudinal stability in studies examining the stability of satisfaction given job change. As a result, twin designs can potentially contribute valuable information concerning the consistency and stability of job satisfaction in cross-situational contexts.

SUMMARY AND DISCUSSION

Where do we stand with regard to the issue of person–environment factors and their influence on job satisfaction? It seems to us that the following summary observations, given under the headings below, are in order.

Determinants of Job Satisfaction

It is obvious that both factors associated with the individual and facets of the job environment are important determinants of job satisfaction. From the longstanding person–situation controversy in the personality domain we have learned that it is senseless to ask whether persons or situations are important (Pervin, 1968). The research reviewed above clearly demonstrates that a number of individual characteristics and a number of situational variables account for variance in job satisfaction. In order to simply operationalize and measure the job satisfaction construct one needs to have an individual working in and experiencing a job environment. It is interesting to observe that several recent treatments of this issue (e.g. Staw & Ross, 1985; Gutek & Winter, 1989) seem to imply that previous research and researchers have not considered the possibility that person factors were associated with job satisfaction. Our review reveals that these factors were among the first examined as potential correlates of job attitudes.

Method

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Partitioning Variance

We recognize that the percentage of variance in responses to job satisfaction instruments attributed to various factors can vary drastically depending upon the nature of the sample and types of situations sampled (Weiss & Adler, 1984). It would be possible to arrange studies such that virtually any amount of variance, from 0% to 100%, could be attributed to person variables, situational variables, or the interaction between the two. The proportion of variance attributed to each of these factors depends upon a number of factors, including the range and variance of variables measured. For example, a researcher could examine the relative influence of person and situational factors in extremely good and extremely poor work environments. Under this circumstance, a great deal of variance will undoubtedly be attributed to situational factors. Conversely, both psychotically depressed workers and extraordinarily happy workers could be sampled. In this case, it is likely that a large portion of variance will be attributed to person factors. Nonetheless, we feel that studies examining the importance of variables in accounting for variance in satisfaction are informative and worthwhile.

As we have noted, it is difficult to form precise estimates of the proportions of variance due to person and situational factors or their interaction. However, based on the literature we have reviewed and making a number of abstractions over different studies, our hunch is that person factors account for between 10 and 30% of the variance in job satisfaction, that 40–60% of the variance is associated with situational factors, and that interactive elements account for between 10 and 20%. We say this very tentatively. We have not performed an exhaustive review of the literature nor have we been able to sort out the effects of person–environment interactions from additive effects. Moreover, these estimates do not take complex interrelationships between person and situational factors into account (see below).  

Methodological Issues

There are a number of methodological issues and research questions in this arena which need clarification and development. A few of these issues and questions are discussed below.

1. There is confusion regarding which person variables should be examined.
   A formidable array of person variables have been discussed as possible determinants of job satisfaction in the research literature. These include...

*We also recognize that there is debate regarding the appropriateness of statistical indices commonly used to partition variance between persons and situations. A discussion of the problems associated with indices used to partition variance due to persons and situations can be found in Golding (1973) and Olweus (1977).*
demographic factors such as gender, age, and race as well as psychological individual differences variables or dispositions. Seashore & Taber (1975) identify a number of person factors along a 'more stable...less stable' dimension. Person factors identified which are relatively stable are demographic variables, stable personality variables, and abilities, whereas person factors which they classify as relatively unstable are perceptions, cognition, and transient affective states (such as anger and boredom).

More clarification is needed, however, to help identify the person factors most likely to be associated with job satisfaction.

It would be helpful if researchers would choose person variables on a theoretical basis, instead of indiscriminately including any conveniently available person variables (Weiss & Adler, 1984). Weiss & Adler (1984) advise researchers who wish to examine relationships between personality variables and organizational behavior to use variables with well-established nomological nets. This advice is particularly appropriate in the theory-barren job attitude domain, which could be greatly enriched by establishing links between satisfaction and personality constructs (such as positive and negative affectivity) which have been shown to have important affective and behavioral correlates.

2. Similarly, almost every imaginable situational variable has been discussed in this research literature. A coherent taxonomy of job environments and situations is needed to guide satisfaction research. This taxonomy should be based on theoretical as well as empirical work. Olson & Borman (1989) have begun to develop a taxonomic structure for work environments in a military setting which might be used to assess situational constraints and facilitators of performance. Perhaps this and related taxonomic structures could also be used within the context of work attitude studies.

3. Researchers need to pay greater attention to the direction of causal arrows linking person variables, situational variables, and job satisfaction by employing statistical techniques based on structural equation modeling and by undertaking longitudinal studies.

4. Greater clarification is needed concerning the interdependence of person and environmental variables. Schneider (1987), for example, argues that the environment is influenced by individuals through selection and attrition processes in organizations. The employees remaining tend to create specific work climates and environments. Arvey et al.'s (1989) finding that there is a genetic tendency for individuals to seek and work in particular occupations is consistent with this notion. Similarly, James et al. (1978) suggest that there may be reciprocal influences between people and work climates. Thus, it may be useful to think of the matrix of person-environment variables as a set of overlapping cells with redundancies built into them.

5. More work needs to be done to gain an understanding of the range of

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The research is fascinating. Some interesting ideas are presented and there is a better understanding of the issues in this area.

Correspondence
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271 19th Ave.

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Dispositional and Situational Influences

situations which will elicit potentially different job satisfaction responses. Most research is conducted in settings where the facets of the job environment are only slight variations within an organizational milieu. It might be quite helpful to study job attitudes among persons in radically different job environments (e.g., extremely complex jobs, jobs characterized by extreme social isolation and chaotic working conditions, etc.). It is possible that the observed associations between satisfaction and environmental factors are greatly constrained due to restriction in range.

6. More research needs to be conducted in settings where the same persons receive exposure to multiple job environments. The longitudinal studies of Staw & Ross (1985) and Gerhart (1987) are important starts in this area. Cross-sectional designs are severely limited in their information yield.

7. More creative research designs need to be developed and utilized. The twin studies discussed above represent one creative approach to job satisfaction research. Another possibility might be to conduct laboratory studies where individuals are asked to work under carefully controlled and different environments, or to examine the job satisfaction of temporary help employees as they work across different work environments.

A FINAL WORD

The research issues surrounding the examination of influences on job satisfaction are fascinating, and a diverse array of research designs could be utilized in exploring these issues. There is a need for creative theory and research to gain a better understanding of the nature of job satisfaction and of other subjective reactions to the job. Hopefully, this chapter will challenge others to continue in this area.

Correspondence address
Industrial Relations Center, 574 Management and Economics Building, University of Minnesota, 271 19th Avenue South, Minneapolis, Minnesota 55455, USA.

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