

JOB SATISFACTION AND PERSONALITY: THE UTILITY OF  
THE FIVE-FACTOR MODEL OF PERSONALITY

by

GREGG F. TANOFF

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Gregg F. Tanoff for the degree of Doctor of Philosophy  
In the Department of Applied Behavioral and Communication Sciences  
to be taken March 1999

Title: JOB SATISFACTION AND PERSONALITY: THE UTILITY OF THE  
FIVE-FACTOR MODEL OF PERSONALITY

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This study examined the relationship between personality and job satisfaction in a major international corporation. Personality features were specifically defined by the Five-Factor Model (Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness) assessed by the Big Five Inventory: Version 44 (John, Donahue, & Kentle, 1991). Data were collected from 804 participants in six occupational areas (technical, business, human resources, administrative, legal/wellness, and non-exempt) and spanning four job classification levels (senior management, middle management, supervisory, and non-supervisory responsibility employees). Correlational analyses revealed a significant, inverse relation between Neuroticism and job satisfaction in all but one job category. Openness was the only personality dimension that did not significantly

correlate with job satisfaction. Stepwise multiple regression analysis was completed using personality and other demographic variables. Again, Neuroticism was the primary personality factor accounting for variance in job satisfaction. Implications of these findings for vocational counseling and future research directions were discussed.

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## CHAPTER I

### INTRODUCTION

The field of counseling psychology traces the beginning of its focus on vocational interest to the release of the hallmark publication, *Choosing A Vocation* (Parsons, 1909).

According to Parsons:

In the wise choice of a vocation there are three broad factors: (1) a clear understanding of yourself, your aptitudes, abilities, interests, ambitions, resources, limitations, and their causes; (2) a knowledge of the requirements and conditions of success, advantages and disadvantages, compensation, opportunities, and prospects in different lines of work; (3) true reasoning on the relations of these two groups of facts. (1909, p. 5)

This emphasis on an understanding of self with respect to the vocational environment is consonant with the more general question in personality psychology of person-environment fit (Holland, 1966, 1973). That is to say, a prediction of vocational satisfaction can not examine only the person or environment but must examine the critical dynamics of this interactive process. This tenant has not gone undisputed. The interaction between person and environment has been much debated in the understanding of job satisfaction in relation to behavior within organizations (Terborg, 1981).

John Holland's (1966, 1985a) work in vocational psychology provides a framework for addressing the question of person-environment fit. Holland's model, first developed in the mid 1960's, provides a typology based on the concept of congruence between the individual and the situation (Holland, 1966). "Vocational satisfaction,

stability, and achievement depend on the congruence between one's personality and the environment in which one works" (Holland, 1985a, p. 10). Utilization of such instruments as the Strong Interest Inventory (Harmon, Hansen, Borgen, & Hammer, 1994) or Holland's Self Directed Search (Holland, 1985c) provides an assessment of personality and environment matching. Holland (1966, 1973, 1985a) categorized person and environment into six types: Realistic, Intellectual, Artistic, Social, Enterprising, and Conventional. Herr and Cramer (1992) provided the following description of Holland's typology in relation to environment.

Realistic occupations (R) include skilled trades and many technical and some service occupations. Investigative occupations (I) include scientific and some technical occupations. Artistic occupations (A) include artistic, musical, and literary occupations. Social occupations (S) include educational and social welfare occupations. Enterprising occupations (E) include managerial and sales occupations. Conventional occupations (C) include office and clerical occupations. (p. 140)

Holland also describes people according to these six categories. The Realistic person is typically frank and active, preferring to work with things. The Investigative person is described as analytical, preferring to work with their minds. Artistic individuals usually prefer using their imagination or creativity. The Social individual is usually seen as friendly and skilled with words. The Enterprising person likes to work with people to persuade or influence. Finally, the Conventional individual is usually seen as practical, someone who likes to work with data (Holland, 1985a). Thus this model explains the individual's personality and specific environments leading to a theory of interaction.

The classification model presented by Holland (1966, 1973, 1985a) has been the dominant taxonomy utilized in the matching of person and environment for resultant job

satisfaction (Arvey, Carter, & Buerkley, 1991). With the exception of Holland's model, previous research on vocational satisfaction has focused on either situational factors (Hackman & Oldham, 1980; Locke, 1976) or dispositional factors (Furnham & Zacherl, 1986; Judge, 1993; Lefkowitz, 1994). Despite such research, the interactional approach is likely to be the optimal approach to understanding job satisfaction (O'Reilly & Roberts, 1975; Arvey et al., 1991).

Dispositional aspects effecting job satisfaction have recently focused on negative affectivity (NA) (Burke, Brief, & George, 1993; Levin & Stokes, 1989; Clark & Watson, 1991). Clark and Watson (1991) described NA as "the tendency to experience a wide variety of negative and upsetting emotions" (p.222) and equated NA with Neuroticism, one of the main areas in the five-factor model of personality. Levin and Stokes (1989) reported that in both laboratory and correlational studies NA was significantly associated with lower job satisfaction. Their findings support the logical conclusion that high Neuroticism scores will predict lower ratings of job satisfaction. While an important finding, job satisfaction is likely to be related to a broader spectrum of personality features. This single approach, however, seems to neglect the full gamut of personality as it may influence job satisfaction.

A different approach that can contribute to Holland's typology, is the five-factor model, presently regarded as the predominant taxonomy for understanding personality (Digman, 1990; John, 1990). Goldberg (1990) provided the following summary of the five-factor model.

These "Big-Five" factors have traditionally been numbered and labeled as follows:

(I) Surgency (or Extraversion), (II) Agreeableness, (III) Conscientiousness (or Dependability), (IV) Emotional Stability (vs. Neuroticism), and (V) Culture. Alternatively, Factor V has been interpreted as Intellect (e.g., Digman & Takemoto-Chock, 1981; Peabody & Goldberg, 1989) and as Openness (e.g., McCrae & Costa, 1987). (p. 1217)

Although the five-factor model has been utilized in studies comparing the Holland typology (Costa, McCrae, & Holland, 1984; Tokar & Swanson, 1995), the analysis of the full five-factor model and job satisfaction has yet to be examined. Studies have addressed only limited portions of the five-factor model and job satisfaction. For example, Organ and Lingl (1995) focused on Agreeableness and Conscientiousness. They reported that Agreeableness was positively related to overall job satisfaction, but Conscientiousness related negatively to satisfaction (Organ & Lingl, 1995). Sterns, Alexander, Barrett, and Dambrot (1983) considered only Neuroticism and Extraversion and found that Neuroticism was negatively correlated with job satisfaction while Extraversion was negatively correlated with only a few dimensions of job satisfaction. Research by Furnham and Zacherl (1986) supported the negative correlation between Neuroticism and job satisfaction but found that Extraversion was positively correlated with job satisfaction. Although a distinct relationship is emerging between Neuroticism and job satisfaction, the influence of multiple personality factors is still unclear.

It has been emphasized by Hogan, Hogan, and Roberts (1996) that singular measures of personality do not capture the full picture of personality as a contributing factor in work place satisfaction. Holland supported this approach by his emphasis on a minimum of three different individual code types in matching specific job areas (Holland, 1973, 1996; Moody, 1983). Given the support for a person-environment interaction in job

satisfaction and the encouraging, but limited results examining single dimensions of personality, the time has come to more comprehensively investigate personality as it impacts job satisfaction.

This more comprehensive approach, as outlined in the five-factor model of personality has been used in several other studies of person-environment interactions. For example, Barrick and Mount (1991) and Tett, Jackson, and Rothstein (1991) presented meta-analyses of the "Big Five" and job performance. Their findings differed across occupational groups in the prediction of job performance, yet both groups of researchers were emphatic about the utility of the five-factor model of personality in the workplace (Barrick & Mount, 1991; Tett et al., 1991). Costa and McCrae (1991) echoed this sentiment, even though their research was more broadly focused on life satisfaction and happiness.

As previously emphasized, the interactional model must address both the person and the environment. As important as it is to expand the components of personality, it is equally important to address specific job characteristics. Locke (1976) suggested that job characteristics can be represented on a variety of dimensions, including rewards, roles, and responsibilities. For example, Hackman and Oldham (1980) highlighted those reward systems that have a direct effect on satisfaction of employees. They argued that "when productive behavior is rewarded by the organization, people will work more effectively and thereby gain valued rewards that enhance their own satisfaction with the work and the organization" (p. 35). Another aspect of the situation that has yet to be examined is the difference that status or role may play in relation to job satisfaction. Locke (1976) noted

roles, responsibility, and status may have profound effects on job satisfaction.

Nonetheless, it does not appear that previous research has considered job stratification as a major influence factor in the understanding of job satisfaction.

In relating individual variation on the five-factor model of personality with job satisfaction for different job classifications or occupational areas, it is expected that the personality dimensions which predict job satisfaction will vary as a function of job classification or occupational area. Multiple regression analysis (Wampold & Freund, 1987) will be used to test this hypothesis. Job classifications and occupational areas are nominal variables and satisfaction and personality are quantitative variables. This design permits the interaction of variables to be examined within and across groups. The development of a model that can account for the full effects of dispositional factors across differing situations should add immensely to the understanding of the relation of personality to job satisfaction.

The purpose of this study is an in-depth examination of personality and job satisfaction with a focus on dispositional factors within and across job classifications and occupational areas. Therefore, this study will address the following questions. First, does Neuroticism significantly contribute to lower job satisfaction and what amount of the variance is explained by this factor? Second, do Extraversion, Agreeableness, Conscientiousness, and Openness contribute to higher levels of job satisfaction and how much additional variance can be explained with these four domains? Third, are the effects of personality only evident at a general level or are there specific interactions across differing occupational areas and job classifications? Fourth, what amount of explained

variance in job satisfaction is accounted for through different demographic factors (e.g., age, education, and gender) across and within differing job situations? Fifth, what amount of the explained variance is accounted for by job variables, such as pay or time with a corporation? The scope of this study focuses on the five-factor model of personality, additionally considering demographic and situational variables. The emphasis is on job satisfaction as the dependent variable, and the five-factor model and other dispositional factors as the independent variables.

This study should add to the existing literature by examining the connection between work and core dispositional factors, thus enhancing the understanding of personality in vocational counseling in aiding the applied work of counseling psychologists and guiding future research on the factors that contribute to job satisfaction. In Chapter II, the Review of the Literature, an examination of job satisfaction is presented. This domain includes situational and dispositional factors, and the combined person-environment fit model in addressing the influence of these factors in the empirical study of job satisfaction.

## CHAPTER II

### REVIEW OF THE LITERATURE

#### Understanding Job Satisfaction

A recent search of the literature, (i.e., PsycINFO, September 1998) under the subject area of job satisfaction, revealed over 6,000 references in this area based on a database search from 1887 through 1998. Locke (1976) presented a similar finding of the extensive literature in this area, noting there is "a total of 3,350 articles (or dissertations) on the subject to this date" (p. 1297). Cranny, Smith, and Stone (1992) stated, "Were a count of relevant articles or dissertations made today there would undoubtedly be more than 5,000 such works" (p. 1). Thus, there is strong evidence that the concept of job satisfaction has been extensively studied. Nonetheless, the discipline still lacks the knowledge to predict, control, or understand the factors related to job satisfaction. Therefore, the review of the literature begins with what has been learned to this point in the arena of job satisfaction theory and research.

Perhaps the first question to be answered in this area involves understanding a definition of job satisfaction. This in and of itself is not a simple task. Harpaz (1983) emphasized that job satisfaction has been defined in numerous ways. He reported that "authors use the term 'job satisfaction' 'job attitudes' 'morale' and 'organizational climate' interchangeably" (Harpaz, 1983, p. 14). Locke (1976) provided the following

definition, "*Job satisfaction may be defined (for the present) as a pleasurable or positive emotional state resulting from the appraisal of one's job or job experience*" (p. 1300).

Spector (1997) provided a somewhat more succinct understanding of this concept, "Job satisfaction is simply how people feel about their jobs..." (p. 2). Finally, Cranny et al.

(1992) presented what they believed to be the present definitive understanding of job satisfaction as, "an affective (that is emotional) reaction to a job that results from the incumbent's comparison to those that are desired (expected, deserved, and so on)" (p.1).

Common threads in these definitions focus on time and person. That is, the concept of job satisfaction appears to be based on an affective assessment of one's past and/or present experiences. Locke (1976) reinforced these ideas by differentiating job satisfaction from morale. The understanding of time puts morale as more oriented to the future, while job satisfaction seems rooted in an appraisal of present or past situations. He also believed that job satisfaction was an individual quality, whereas morale was determined by members of the group (Locke, 1976). These definitions help specify the parameters of job satisfaction and provide direction for future empirical study.

Before leaving the area of defining job satisfaction, a brief discussion on the focus of general job satisfaction and facet components of job satisfaction must be presented. The previous definitions revolve around the notion of general job satisfaction as a singular construct. Wanous and Lawler (1972) considered these different perspectives in their definition of job satisfaction. Their study examined nine different operational definitions using facet scores and an overall general score. They stated that "as far as the measurement of satisfaction is concerned, the data suggest that there is no one best way to

measure it" (Wanous & Lawler, 1972, p. 104). This debate on how to define job satisfaction was additionally fueled by Scarpello and Campbell (1983). They reported that "the results of the present study argue against the common practice of using the sum of facet scores as the measure of overall job satisfaction" (p. 595). More recently, Highhouse and Becker (1993) attempted a replication of the Scarpello and Campbell (1983) findings. Here again the results suggested that combining facet measures to report a general job satisfaction rating appears deficient. Despite this conclusion, much of the literature in this area is based on the more general, singular definition. Consequently, the focus of this review is on general job satisfaction, which will be addressed as job satisfaction.

In the area of job satisfaction, answering the question of why study job satisfaction represents the applied nature of this construct. Spector (1997) provided a discussion of three key components in this area. First, he referred to a humanitarian element, "the humanitarian perspective is that people deserve to be treated fairly and with respect. Job satisfaction is to some extent a reflection of good treatment" (p. 2). The second reason seemed to be more of a pragmatic endeavor. "The utilitarian perspective is that job satisfaction can lead to behavior by employees that affects organizational functioning" (p. 2). Finally, a focus on organizational outlook was presented. "Furthermore, job satisfaction can be a reflection of organizational functioning. Differences among organizational units can be diagnostic of potential trouble spots" (p. 2). All of these areas connect with the vocational focus of congruence or fit that influences both the individual and the organization (Holland, 1966, 1985a). The empirical study of job satisfaction

contributes to a range of applied issues and to the theoretical constructs that undergird this construct.

### What Influences Job Satisfaction?

Based upon the previously mentioned definitions of job satisfaction, it is readily apparent that the person is a critical determinant of job satisfaction. It is also the case that the situation and the interaction between the person and the situation are at the core of what determines job satisfaction. Arvey et al. (1991) provided an excellent review in this area. They differentiated the situational and individual components in the following statement.

We adopt the perspective that the term 'situational' factors refers to variables and constructs which are predominantly 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.  
(pp. 359-360)

### Situational Factors

The focus on situational aspects in understanding job satisfaction appears to have grown out of the Skinnerian emphasis on environment versus person variables. Thus, the environment became the driving force in understanding job satisfaction. This focus is exemplified in the Hawthorn studies of the 1920s and 1930s and has continued in the Job Characteristics model of Hackman and Oldham (1975, 1980).

Spector (1997) reported that Hackman and Oldham's (1975, 1980) job characteristics model is "the most influential theory of how job characteristics affect people..." (p. 31). This model focuses on five basic characteristics that can be examined in any job. These characteristics are: skill variety, task identity, task significance, autonomy, and job feedback (Hackman & Oldham, 1975, 1980). These five characteristics provide three psychological states: experienced meaningfulness, experienced responsibility, and knowledge of results, which influence the outcome of job satisfaction (Spector, 1997).

Meta-analysis of this theory has been conducted through the use of the Job Diagnostic Survey (JDS) (Hackman & Oldham, 1975) by Loher, Noe, Moeller, and Fitzgerald (1985) and Fried and Ferris (1987). In the Loher et al. (1985) study correlations between job characteristics and job satisfaction ranged from .24 to .34. Fried and Ferris (1987) reported similar findings with correlations ranging from .25 to .50. Accounting for the variance of job satisfaction of these characteristics yields estimates ranging from .05 to .25. As these figures indicate, situational variables are not huge factors in influencing job satisfaction.

Before drawing premature conclusions about this model, several methodological critiques about these studies have been raised. Taber and Taylor (1990) provided a meta-analytic review of the psychometric properties of the JDS. They reported low internal consistency of measures, ranging from .65 to .71. They also suggested that the scales lack comprehensiveness and that identification of new scales could enhance the situational variables accounting for variance in job satisfaction.

Another theory that has emphasized situational aspects is Herzberg's Motivator-Hygiene theory, commonly called the two-factor theory, (Locke, 1976). Herzberg (1966) reported that motivators led to satisfaction at work, while hygiene factors led to dissatisfaction. Motivators include achievement, recognition, the work itself, responsibility, and achievement and growth. Hygiene factors include supervision, working conditions, co-workers, pay, policies, and job security. Locke (1976) reported that although this theory has had a major impact on the field of job satisfaction, the empirical proof has not surfaced. Even with these limitations, Landy (1985) believed that Herzberg's theory has furnished useful perceptions into understanding situational influences on job satisfaction.

The previously discussed theories are global in nature, attempting to account for all of the situational variables that might influence job satisfaction. In many respects they have spawned the study of more specific situational variables such as pay, role, and tasks. A brief review of some of the specific situational variables follows.

Pay seems to provide a rational, direct connection to job satisfaction. The more you're paid, the happier you'll be, right? This statement does not seem to fit the empirical findings. If anything, the relation between pay and job satisfaction is less than impressive. Spector (1985) reported a mean correlation of only .17 across three diverse occupational samplings between pay and job satisfaction. Seashore and Tabor (1975) reported that although positive in direction, the small correlation between job satisfaction and pay is estimated to be only .20 across the workforce. Another study by Schwab and Wallace (1974) examined pay satisfaction through the use of the Minnesota Satisfaction

Questionnaire (MSQ) and the Job Description Index (JDI). They reported that organization and wage level, type of pay system, age, tenure, and sex account for between 12% and 18% of the variance in pay satisfaction. Their conclusion is telling, "the results to date appear to have only limited practical significance" (p. 121). Although pay does not appear to directly relate to job satisfaction, the perception of equality might have some influence. Rice, Phillips, and McFarlin (1990) reported a fairly large correlation (.50) between pay and job satisfaction within a homogeneous group of workers. The perception of equality of pay might relate to overall job satisfaction. As Spector (1997) reported

This means that people should perceive the policies and procedures by which salary is administered to be fair, even if it results in differential pay. In other words, the process can have a bigger impact on job satisfaction than the actual levels of pay. (p. 42)

Thus, perception versus reality reflects the true relationship between pay and job satisfaction.

Two areas that seem to influence job satisfaction relate to role conflict and role ambiguity. Role conflict results from incongruent messages about specific functions or roles (Wagner & Hollenbeck, 1992). Role ambiguity revolves around the clarity of expectations, or more specifically the lack of explicitness toward an individual's role (Wagner & Hollenbeck, 1992). In their meta-analysis that included 96 studies between 1970 and 1983, Jackson and Schuler (1985) reported mean correlations of -.31 for role conflict and -.30 for role ambiguity in relation to overall job satisfaction. Over a decade later, Spector (1997) concluded that the limited number of studies in this area begs for

continued research to fully ascertain the true influence of these specific situational variables.

Specifics to the organizational task, such as workload, complexity, and meaningfulness, also influence job satisfaction. Spector (1997) described workload as “demands placed on the employee by the job. Qualitative workload is the effort required by job tasks or the level of difficulty both mental and physical” (p. 43). The actual correlation with job satisfaction appears to differ across studies possibly due to measures that are used to address this concept (Spector, 1997). In contrast, job complexity has been shown as a steady predictor of job satisfaction. Gerhart (1987) reported a correlation of .36 (corrected for measurement error) between job satisfaction and perception of job complexity. Finally, the meaningfulness of the task may contribute to job satisfaction. Wagner and Hollenbeck (1992) believed that this perception of the value of the task can “ultimately contribute to high levels of satisfaction” (p. 266).

Despite variable and relatively low correlations, many researchers believe that the situation has an important role in the analysis of job satisfaction. As discussed, the situation may be viewed in total or as component aspects to the situation. Nonetheless, the study of just situational variables does not seem to tell the whole story of understanding job satisfaction. Thus, a discussion of individual or person variables is now considered.

### Individual Factors

Over the past decade research on job satisfaction has shifted from examining only

situational or environmental factors to the analysis of dispositional or person factors. Arvey et al. (1991) divided person factors into "psychological individual difference variables and demographic variables" (p. 360). Demographic variables include components such as age, education, and gender. Psychological variables comprise factors such as, locus of control, negative affectivity, and other constructs under the umbrella of personality. This change in focus was spurred by Staw and Ross (1985) who reported that job satisfaction was stable across time and different occupations. They attributed their findings to the dispositional influence on job attitudes, specifically job satisfaction. Arvey, Bouchard, Segal, and Abraham (1989) have also championed the cause of dispositional influence based on genetics. They reported "that approximately 30% of the observed variance in general job satisfaction was due to genetic factors" (Arvey et al., 1989, p. 187). These and other studies (e.g. Staw, Bell, & Clausen, 1986; Gerhart, 1987; Gutek & Winter, 1992; Steel & Rentsch, 1997) have continued the focus on person variables in relation to job satisfaction, consistently supporting the relation between person variables and job satisfaction.

The study of demographic variables in association to job satisfaction accounts for a large portion of person variable research (Arvey et al., 1991). Age, education, and gender appear to have been the primary variables empirically studied.

Age has an overall positive relationship with job satisfaction. The nature of this relationship has been reported as either a linear function (Lee & Wilbur, 1985) or as a U-shaped relationship (Clark, Oswald, & Warr, 1996). The linear relation basically states that

as age increases job satisfaction increases. Lee and Wilbur (1985), with a fairly large sample ( $N = 1707$ ), showed an increase in job satisfaction with age when controlling for effects of salary, education, or job tenure. Previously, Saleh and Otis (1964) reported that job satisfaction increases in age till approximately 60 years old and then begins to decline. The U-shaped model states that satisfaction begins high, declines, and then increase in the later years of work. Clark et al. (1996) reported that job satisfaction typically declines into the employees' early thirties, then steadily increases over time. The debate about the true relation between job satisfaction and age continues, but this variable appears to have some influence on worker satisfaction.

Education and gender have not been consistently related with job satisfaction. Quinn and Baldi de Mandilovitch (1980) presented a positive relation between education and job satisfaction across occupations. Arvey et al. (1991) equated this to the relation between rewards and educational level, not just education and overall satisfaction. Within occupational areas or if rewards are not confounding, there appears to be no relation to job satisfaction for educational level (Arvey et al., 1991). In the area of gender and job satisfaction, no distinct pattern emerges. Arvey et al. (1991) stated that "The underlying causes of this lack of differences are unclear, although they may reflect gender differences in both values and frames of reference" (p. 363). In other words, education in itself is not the influence factor, but the value placed upon education might differ between men and women, thus influencing job satisfaction levels. Future research may need to try and understand the relation between demographics and job satisfaction with further consideration of cross-cultural implications.

In addition to exploring the demographic characteristics, the research on dispositional variables has revived the relation between personality and job satisfaction. This has not always been the case. The idea that personality actually contributed to little of the variance in human behavior was championed by Mischel (1968). Despite his early influence, the dispositional perspective has shown renewed acceptance especially in organizational settings (Hogan, 1998; Hogan et al., 1996; Weiss & Cropanzano, 1996). The review in this section focuses on three main areas: (a) locus of control, (b) negative affectivity, and (c) the five-factor model.

The concept of locus of control was developed by Rotter (1966) as a variable that assesses how an individual is influenced by life events. Those with an external frame of control focus on the outside world and a belief that they are influenced by others or the environment. Individuals with an internal locus believe that they can influence outcomes. Spector (1997) provided a succinct functional definition for locus of control.

Locus of control is a cognitive variable that represents an individual's generalized belief in his or her ability to control positive or negative reinforcements in life. An external believes in control by outside forces or people. An internal believes he or she is able to influence reinforcements. (p. 51)

This concept was operationalized by Rotter (1966) with the Internal-External (I-E) scale. This scale contains 29 items, six of which are filler items, resulting in a total number score between 0 and 23. Individuals with a low score are said to have an internal reference and those with a high score an external reference. Another more specific scale developed by Spector (1988), the Work Locus of Control Scale, focuses on the belief of control in the work environment.

Previous research has shown a positive relationship between locus of control and job satisfaction. That is to say, that individuals that tend to be higher in internal locus of control tend to have higher job satisfaction (Spector, 1997). Spector and O'Connell (1994) reported a significant correlation between locus of control and job satisfaction emphasizing an internal locus of control showing higher job satisfaction. As mentioned earlier there are a number of work specific scales for locus of control. Petterson (1985) found a significant difference between the Rotter (1966) I-E scale and a new work scale in relation to job satisfaction. Specifically, he reported the I-E scale correlated with the job satisfaction at  $-.16$  and the work specific scale at  $.39$  ( $t = 2.50, p < .01$ ). Thus, a more specific focus to the construct of locus of control is needed to understand the relation to job satisfaction. Finally, Spector (1997) reported that the relationship between job satisfaction and locus of control might be explained through increased performance. If an individual with a more internal locus of control is able to control the situation thereby increasing performance, increased job satisfaction may be the overall outcome.

Another concept of individual differences that has recently been highlighted is the area of Negative Affectivity (NA) (Judge, Locke, Durham, & Kluger, 1998). Clark and Watson (1991) described NA in the following manner.

The single most important feature of NA is the pervasive tendency to experience a wide variety of negative and upsetting emotions. Distressed mood states such as anxiety, tension or jitteriness, and worry are central, but anger, frustration, hostility, contempt, disgust, guilt, worthlessness, dissatisfaction, feelings of rejection, sadness, loneliness, discomfort, irritability, and so forth are frequently experienced by high NA individuals, even in the absence of obvious stressors (see Watson & Clark, 1984, Tables 5-7; Watson & Tellegen, 1985). (p. 222)

This overall negative experience intrudes into all aspect of life, including the workplace. Therefore, the area of job satisfaction would seem to be prime territory to examine the concept of NA in the world of work.

A landmark study by Levin and Stokes (1989) showed a significant relationship between negative affectivity and job satisfaction. This research incorporated both laboratory and field studies. In the field study, the relation between job satisfaction and NA was reported as  $r = -.29$ ,  $p < .001$  and beta weight of  $-.218$ ,  $p < .001$ . They concluded with the statement that "The results of this research show that NA is predictive of task/job satisfaction, although the percentage of variance accounted for by NA is small" (p. 757).

A more recent study by Brief, Butcher, and Roberson (1995) reported the relation between job satisfaction and NA as  $r = .34$ ,  $p < .01$ , for employees at a medium size hospital ( $n = 57$ ). Also, Cropanzano, James, and Konovsky (1993), in a study of employees at a privately owned pathology laboratory in the Southeastern United States ( $N = 198$ ), reported a correlation between NA and job satisfaction of  $.24$ ,  $p < .01$ . The relation between job satisfaction and NA though small, is important and appears to influence other aspects of the job and life in general (Cropanzano et al., 1993; Judge, 1993; Judge et al., 1998).

A somewhat neglected area in utilizing person variables to understand job satisfaction involves the general concept of personality. Although personality assessment procedures are utilized to a great degree in organizational settings, the empirical base for understanding personality and occupational specific outcomes (e.g., job satisfaction and performance) appears limited (Robertson, 1993). Possibly this lack of research focus is

due to the depth and breath of the term personality. Pervin (1989) presented seven basic approaches to understanding personality: psychodynamic, phenomenological, cognitive, trait, behavioral, social learning, and cognitive processing. Each of these schools or perspectives take a somewhat different approach to the understanding of the individual. The trait approach has been highlighted in organizational settings due to the focus on measurable characteristics of the individual. As Robertson (1994) stated, "The capability of the trait/factor analytic approaches to measure, compare, classify and evaluate people has made them popular amongst personnel psychologists and human resource practitioners" (pp. 76-77). Within this approach, consensus continues to build around the theory that five basic traits encompass the structure of personality. This theory has been coined the Big Five (Feshbach, Weiner, & Bohart, 1996). Due to the widespread acceptance of this approach, this review will focus on this five-factor model (FFM) and the application of this model in the analysis of job satisfaction.

The FFM is usually represented by the following dimensions: I: Extraversion (or Surgency); II: Agreeableness (or Friendliness); III: Conscientiousness (or Will); IV: Neuroticism (or Emotional Stability); and V: Openness (or Intellect) (Digman, 1990). Pervin and John (1997) described each of these dimensions.

*Neuroticism contrasts emotional stability with a broad range of negative feelings, including anxiety, irritability, and nervous tension. Openness to Experience describes the breadth, depth and complexity of an individual's mental and experiential life. Extraversion and Agreeableness both summarize traits that are interpersonal--that is, they capture what people do with each other and to each other. Finally, Conscientiousness primarily describes task- and goal-directed behavior and socially required impulse control. (p. 260)*

Additionally, the dimension of Extraversion focuses on intensity of relationships and the activity level of the individual. Agreeableness centers on compassion or forgiveness and an overall trusting approach to relationships (Costa & McCrae, 1992). Exceptional reviews of the history and development of the FFM are presented by numerous authors (see Digman, 1990; McCrae & John, 1992; Pervin & John, 1997; Wiggins & Trapnell, 1997). The reader is referred to these sources for an in-depth review of the FFM.

If the FFM has gained the consensus of researchers in understanding the trait domain, and personality appears to be an accepted construct in organizational settings, it would therefore seem logical that research would focus on the FFM in the analysis of job satisfaction. However, the review of the literature does not show a substantial focus on the relation between the FFM and job satisfaction. For example, Mount and Barrick (1995) provided an exceptional review of the FFM and implications for work related research. Unfortunately, they only focused on job performance and disregarded job satisfaction as a topic of research utilizing the FFM. Borman, Hanson and Hedge (1997) also presented a compelling rationale for the use of personality measures, specifically the FFM, in the area of personnel selection, but failed to make the connection with the utilization of this framework for researching job satisfaction. Tett et al. (1991) and Barrick and Mount (1991) used the FFM in landmark, meta-analytical reviews of the relation between job performance and personality. Their findings provided an outstanding baseline about the benefits of employing personality measures in the workplace, but again did not specifically address job satisfaction (Hogan, 1996). Even in one of the most current reviews on the topic of job satisfaction presented by Spector (1997) there is no mention of the FFM in

relation to personality traits and job satisfaction. This notwithstanding, there have been a limited number of empirical studies that have examined the FFM as a key to understanding job satisfaction.

Organ and Lingl (1995) selected the dimensions of agreeableness and conscientiousness to examine job satisfaction and organizational citizenship behavior (OCB). They reported the following:

The connection between conscientiousness and satisfaction is not as obvious as that between agreeableness and satisfaction. Still, one could imagine that a "conscientious" disposition would contribute indirectly to satisfaction in a number of ways: as a generalized work-involvement tendency (i.e., a liking for rule-governed behavior that probably is more characteristic of work in organizations than in other life domains); from a "virtue is its own reward" ethic; or from informal rewards (recognition, respect, compliments) generated from others who admire (even if they do not themselves emulate) this characteristic. (p. 341)

This study utilized the Job Descriptive Index (JDI) (Smith, Kendall, & Hulin, 1969) to measure overall job satisfaction and other facet areas. A forced-choice adjective-pair presented by McCrae and Costa (1987) was utilized to measure Agreeableness and Conscientiousness. They reported that demographic variables (age, sex and marital status) and the personality measures accounted for a significant portion of the variance.

Unfortunately they did not provide separate correlations or variance accounted for by the Agreeableness or Conscientiousness dimensions. Also, the actual number of participants in the study was hard to determine. They reported data collection at two different companies and did not specify actual numbers of employees and supervisors that responded to their survey. Despite these limitations, they concluded, "The results support the hypothesis that there are linkages between personality and job satisfaction" (p. 346).

Another study that applied parts of the FFM was conducted by Day and Bedeian (1995). In this study they utilized the Adjective Check List (Gough & Heilbrun, 1965) to assess the domains of Agreeableness, Extraversion, and Conscientiousness. Job satisfaction was assessed with a 6-item scale derived from the Survey of Organizations (Taylor & Bowers, 1972). They estimated reliability for their job satisfaction scale at .75. Participants were 206 nurses at a Veterans Administration Medical Center, 93% African American, and 57.5% female. They did not find a significant correlation between job satisfaction and Agreeableness, but did reports a positive relationship between both Extraversion and Conscientiousness and job satisfaction. Although their work supports the importance of person variables in conducting job satisfaction research, their use of a specific participant pool, limits the generalizability of their findings.

An earlier study by Sterns et al. (1983) examined the relation between job satisfaction and two of the FFM dimensions (Extraversion and Neuroticism) using 175 Civil Service clerical employees at two Veterans Administration Hospital. They did not assess overall job satisfaction, but instead utilized the JDI (Smith et al., 1969) to assess five facet areas of job satisfaction (pay, promotion, work itself, supervision, and co-workers). None of the job satisfaction facet areas were significantly correlated with Neuroticism. However, Extraversion did show a modest, but significant relation to three of the five facet areas: work itself, supervision, and co-workers. Sterns et al. (1983) believed the negative relationship between Extraversion and job satisfaction was in part due to an affective response to the work environment based upon the specific situation studied. No explanation for the lack of significant findings in the analysis between

Neuroticism and job satisfaction was presented. This lack of relation between Neuroticism and job satisfaction in this study goes against the common assumption that Neuroticism and NA are extremely similar, if not the same concept (Judge et al., 1998).

Another study by Furnham and Zacherl (1986) examined the relation between the same two FFM areas (Extraversion and Neuroticism) as measured by the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and job satisfaction (general and seven facet areas) using the Index of Organizational Reactions (Smith, 1976). Subjects were 88 European senior staff members in a multinational computer corporation. Furnham and Zacherl (1986) reported modest, significant correlations between Extraversion and overall job satisfaction of and for the facet area of pay. Neuroticism was not significantly related to overall job satisfaction, but was correlated significantly with three facet areas: (a) amount of work, (b) co-workers, and (c) pay. The authors proposed the modest relations may have been due to the homogeneity of the participants or possible limitations with the psychometric stability of the job satisfaction measure (Furnham & Zacherl, 1986).

Costa and McCrae (1998) developed the NEO-4, utilizing four dimensions of the FFM: Extraversion, Openness, Agreeableness, and Conscientiousness, as a new, possibly more focused assessment tool in the areas of "career counseling, career development, employee training, and personal growth" (p. 1). The NEO-4 utilizes the identical items and scoring procedures as the NEO PI-R (Costa & McCrae, 1992) to assess the four domains previously mentioned. Previous research has connected the vocational interest scales of Holland (1966, 1985a) to the FFM (Costa et al., 1984; Gottfredson, Jones, & Holland, 1993; Tokar & Swanson, 1995). These findings showed a consistent relation between the

domain of Openness to Holland's Investigative and Artistic areas, and Extraversion to Social and Enterprising interests. Costa and McCrae (1998) utilized the Wiggin's (1979) circumplex model as a basis for developing their Style of Interests scoring circumplex. This paradigm incorporated the Openness and Extraversion scores as a representation of vocational interests. Although there is no direct relation presented with this model and job satisfaction, the utilization of this model and Holland's vocation preferences (as discussed later) present a new paradigm that might aid in the understanding of the connection between personality and job satisfaction.

The research in this area has been broad and inconclusive, leaving one to question the true relation between job satisfaction and personality. If Arvey et al. (1989) were correct in their report of a genetic component to job satisfaction, and the consensus around the FFM as a baseline of personality (Digman, 1990) is accurate, the lack of consistent findings is somewhat perplexing. Although, there does seem to be a trend for Neuroticism to be associated with job satisfaction. Perhaps it is time to assess job satisfaction through the full lens of the FFM and consider the interaction between person and situation.

#### Person-Environment Fit

If as previously postulated, neither situation variables nor person variables can lead to a complete understanding of the concept of job satisfaction on their own, it seems only logical that the next step in understanding this concept would be to examine the

interaction between these variables. This avenue of thought has led to an area of study usually referred to as the Person-Environment (P-E) Fit theory (Dawis, 1992). This process of analyzing the person and situation interaction is nothing new in the field of psychology.

Lewin (1935), in his book, *A Dynamic Theory of Personality*, emphasized the need to utilize person and situational variables to understand behavior. The resulting equation of  $B = f(PE)$ , where behavior is represented by  $B$ , predisposition of person variables is represented by  $P$ , and the situation or environmental variables are represented by  $E$ , symbolizes the focus on the P-E interaction (Dawis, 1992). Even prior to Lewin, Parsons (1909) emphasized this same concept in the process of vocational selection. In this same area, Strong (1927) built his theory of vocational interests by matching person and environment. As Bowers (1973) stated, "*situations are as much a function of the person as the person's behavior is a function of the situation*" (p. 327). Similarly, Endler and Magnusson (1976) concluded that "the field of personality is at a crossroads, and we will have to initiate research programs and develop new methods and strategies to empirically investigate the complex interactions that are involved in human transactions" (p. 970). Ekehammar (1974), Magnusson and Endler (1977), and Magnusson (1990) provided exceptional reviews of the history, present situation, and future direction of the study of interactional psychology. The separate emphasis on either personology or the behavioral school has clouded over the interactional focus and neither has provided a comprehensive understanding of job satisfaction. Therefore, the study of job satisfaction should pursue this paradigm of P-E interaction.

The Job Characteristics theory of Hackman and Oldham (1976, 1980) has a major focus on situational variables in the understanding of job satisfaction. More recently, Kulick, Oldham and Hackman (1987) focused on how this model may actually bridge the P-E fit arena of job satisfaction research. They presented the following:

Like other models of person-environment fit (Pervin, 1967; Harrison, 1978), job characteristics theory views job characteristics and individual characteristics as two sets of independent constructs that do not necessarily influence one another. However, recent research suggests that characteristics of the environment do exert a long-term influence on the characteristics of people operating in that environment. (Kulick et al., 1987, p.287)

They concluded with a recommendation for increased research of the Job Characteristics model, with an emphasis on the need to develop more precise means to measure individual differences (Kulick et al., 1987).

Holland (1985a) has advocated a similar line of reasoning, stating that "*Vocational satisfaction, stability, and achievement depend on the congruence between one's personality and the environment in which one works*" (p. 10). This interactional model emphasizes the P-E fit as the concept of congruency.

*Congruence.* Different types require different environments. For instance, Realistic types flourish in Realistic environments because such an environment provides the opportunities and rewards a Realistic type needs. Incongruence occurs when a type lives in an environment that provides opportunities and rewards foreign to the person's preferences and abilities--for instance, a Realistic type in a Social environment. (Holland, 1985a, p. 5)

The congruent individual makes the match between person and environment, thus enhancing overall job satisfaction. Holland's (1966, 1985a) model focuses on categorizing the person and the environment under six broad domains: Realistic, Investigative, Artistic, Social, Enterprising, and Conventional. Holland (1985a, 1996) examined this typology of

six work environments and related personality types in detail. The reader is referred to these sources for an in-depth review of the model. The following paragraphs review empirical findings of Holland's theory.

In 1985, Spokane provided an extensive review of the research dealing with congruence as a key component to Holland's theory. This review included 40 correlational studies and 23 studies focused on change. From these studies Spokane (1985) concluded that congruence is positively correlated with job satisfaction. He expands upon this as he stated the following:

Although large significant  $F$  ratios are found in some congruence studies, correlations between congruence and various outcomes rarely exceed .25-.35, and congruence accounts for roughly 5-10% of variance in outcomes. The percentage of variance typically found in congruence studies (5-10%) may seem small to some readers. But as Rosenthal (1983) shows, it is unwise to label 10% of variance (approximately  $r = .32$ ) as "modest indeed." (In a psychotherapy study this 10% figure would represent an increase in cure rate from 34 to 66%.) On balance, congruence is associated with performance, satisfaction, and stability. (Spokane, 1985, pp. 328-329)

Spokane (1985) focused on the importance of apparently small, yet significant findings, referred to as "the magic .30 correlational plateau" (p. 335), to account for the variance in Holland's congruence hypothesis. He guided further study by recommending a meta-analysis of the congruence hypothesis.

Assouline and Meir (1987) answered the call from Spokane (1985) for a meta-analysis of congruence and satisfaction. They examined 41 different studies on congruence in relation to achievement, stability, or satisfaction. It is interesting to note that of the satisfaction correlations reviewed, 33 were based on a single question of satisfaction (e.g., How satisfied are you with your job?), 14 were based on a satisfaction inventory (e.g.,

Hoppock's Job Satisfaction Blank), four were based on a specially designed inventory, and two were based on unreported measures. They reported an initial weighted mean correlation for satisfaction at .21, then continued to analyze this data for more specific environmental references. In this area, they reported that when a broad approach to occupation was considered that the mean correlation was again .21, but when specialty in occupation was analyzed the mean correlation was .42. This finding points to the need to carefully delineate occupational groups to more accurately account for the variance in the relation to job satisfaction within the P-E fit model. Overall, this meta-analysis supports, and even expands on, the positive relation between congruence and job satisfaction.

Tranberg, Slane, and Ekeberg (1993) completed another meta-analysis on the congruence and job satisfaction hypothesis. The review included 21 of the studies analyzed by Assouline and Meir (1987) and six additional studies completed since the Assouline and Meir study. The overall correlation between mean satisfaction and congruence was a nonsignificant .17 with a 95% confidence interval between -.07 and .42. Additional analysis considered the congruence-satisfaction relation by Holland code type (i.e., Realistic, Investigative, etc.). The range of correlations was from .05 (Realistic) to .33 (Social) and no significance level was reported due to lack of reported sample sizes. Tranberg et al. (1993) believed that "these findings suggest that there may be differences between Holland types in the importance of congruence for satisfaction" (p. 260). In conclusion they stated, "The most important finding of the current analysis is the lack of a significant overall relation between interest congruence and satisfaction" (Tranberg et al., 1993, p. 261).

Gottfredson and Holland (1990) provided a somewhat unique longitudinal study of job satisfaction and congruence. They utilized a homogeneous sample (newly hired bank tellers) with a 4-month follow-up to assess job satisfaction. The congruence model was assessed with Holland's Vocational Preference Inventory (Holland, 1985b) and a three-letter occupational code for bank tellers. This model was used to devise a congruence index as described by Iachan (1984). They reported this index was correlated with overall job satisfaction at .36. Interestingly they found that the best predictor of job satisfaction was a measure that assessed expected job satisfaction. This measure was strongly correlated with overall job satisfaction ( $r = .67$ ). "The results are consistent with an interpretation that a personal disposition to be satisfied may account for part of the individual differences in job satisfaction" (Gottfredson & Holland, 1990, p. 396). I'll return to this concept later in discussing studies relating the FFM and Holland's theory.

Previous research by Costa et al. (1984) analyzed the relationship between Holland's personality types and three of the FFM domains: Neuroticism, Extraversion, and Openness. In the Costa et al. (1984) study none of the Holland types were significantly correlated with the FFM domain of Neuroticism. Correlations between the Investigative and Artistic types were significant with the Openness domain, and the correlations between Social and Enterprising types were significant with the Extraversion domain (overall ranging from a low of .23,  $p < .05$ , to a high of .65,  $p < .001$ ). This research was meaningful to Tokar and Subich (1997) since they used the FFM in addition to the Holland code types. Another interesting component to this study was the rather diverse occupational sample of participants, to include representation of 152 different specific

occupational titles (Tokar & Subich, 1997). They found that Neuroticism and Extraversion were the only two FFM domains that significantly correlated with job satisfaction at  $-.18$  and  $.16$  respectively. Using hierarchical regression analysis, job satisfaction was not significantly related to the congruence scores. However, Neuroticism and Extraversion were again related to job satisfaction with resulting beta weights of  $-.14$  and  $.11$  respectively (Tokar & Subich, 1997). Interestingly, this study points to the possible superiority of the FFM over the congruence hypothesis in addressing specific influences on job satisfaction.

The question of how to calculate congruence indices has led to the development of numerous formats in this endeavor. Young, Tokar and Subich (1998) examined 11 different indices of congruence in relation to job satisfaction. They reported that although each of the 11 indices were highly related to most of the other indices, with a median correlation of  $.73$ , none of the indices were significantly correlated with either a single item measures of job satisfaction or the Hoppock Job Satisfaction Blank (Young et al., 1998). They concluded by recommending future research address career salience as a possible moderating variable to the congruence satisfaction relation (Young et al., 1998).

The question of P-E fit continues to be a relevant focus for the complete understanding of the concept of job satisfaction. A shift in paradigm may be required. The inconsistent findings of the congruence model of Holland leads one to consider the possible utilization of the FFM alone, or in addition to Holland's model, to continue the quest of understanding this concept called job satisfaction.

### Summary

The review of the literature began with a focus on the vast array of empirical research devoted to the study of job satisfaction. Attempting to understand the concept of job satisfaction has led to numerous definitions (Harpaz, 1983). Across these many definitions, the desire to understand job satisfaction has led to a divergence between facet measures and global or general measures of this construct (Wanous & Lawler, 1972). Throughout the study of job satisfaction, a focus was placed upon differing influences to this construct. These influences range from situational to individual and to the combined person-environment fit models (Arvey et al., 1991). The situational variables include work environment as well as specific variables such as pay, role, or occupational tasks (Spector, 1997). Individual influences have been conceptualized in two main areas: demographic contributors and psychological variables (Arvey et al., 1991). Combining situation and disposition with the focus on person-environment fit (Davis, 1992) rounds out the influences on job satisfaction. The research points to the inadequacies of the person and situation approaches as stand alone paradigms in understanding job satisfaction. Therefore, the P-E fit models, incorporating the FFM, are a next logical promising step.

To conclude, the question of job satisfaction is revisited. For three main reasons to study job satisfaction, a humanitarian perspective, a pragmatic focus on organizational outcomes, and as a barometer of the workplace (Spector, 1997). Perhaps as the study of job satisfaction continues these areas can be combined to consider the meaning of life through the world of work. McCrae and Costa (1991) believed that the understanding of

self may be connected in the study of job satisfaction. They stated, "This is perhaps what Freud meant when he suggested that *Liebe und Arbeit*, love and work, were the keys to psychological health and happiness" (p. 228). Alternatively, in existential terms this is why man's search for meaning through occupational endeavors is a continued research focus.

The study of job satisfaction is a predominant focus in the realm of career psychology. Gelso and Fretz (1992) emphasized the need for continued analysis from a combined approach to provide for the best understanding of the process of vocational decision making, thus enhancing overall levels of job satisfaction.

## CHAPTER III

### METHODOLOGY

The methodology section addresses the participants, the measures, the design, and the procedures of this study.

#### Participants

This study involves individuals employed at a large international corporation. The human resources and management training sections of the corporation generated an initial subject pool of 1200 individuals. Voluntary and anonymous participation was emphasized. A total of 804 individuals agreed to participate in this study. This resulted in an exceptionally strong return rate of 67%. It is proposed that the excellent relationships generated by members of the human resource and management training sections across the corporation accounted for this high of a return rate.

Characteristics of the participants included a gender mix of 534 males (66.4%), and 263 females (32.7%). Six hundred eight (75.6%) participants were married, while 182 (22.6%) described their status as single (i.e., separated, widowed, divorced). Concerning the educational status of participants, 182 (22.6%) received high school degrees or the equivalent, 131 (16.3%) had completed an associate degree or trade school program, 253 (31.5%) had a Bachelors degree, 164 (20.4%) had a Masters degree, and 58 (7.2%)

reported completion of a Doctoral or professional degree. The age breakdown of participants was as follows: 37 (4.6%) in the 18-29 range, 186 (23.1%) in the 30-39 range, 358 (44.5%) in the 40-49 range, 174 (21.6%) in the 50-59 range, and 9 (1.1%) in the 60 and over age range. In the area of Race/Ethnicity affiliation, 14 (1.7%) were categorized as Asian American, 74 (9.2%) Black/African American, 24 (3.0%) Hispanic/Latino, 666 (82.8%) White/Caucasian, and 10 (1.2%) as Other. In terms of longevity with the corporation 18 (2.2%) of the participants had been employed for less than 1 year, 84 (10.4%) for 1-4 years, 131 (16.3%) for 5-9 years, 135 (16.8%) for 10-14 years, 189 (23.5%) for 15-19 years, and 236 (29.4%) for 20 or more years. Finally, in reporting years in their present job, 159 (19.8%) were in the category of less than 1 year, 341 (42.2%) in the category of 1-4 years, 152 (18.9%) in the category of 5-9 years, 61 (7.6%) in the category of 10-14 years, 30 (3.7%) in the category of 15-19 years, and 27 (3.4%) were in the category of 20 or more years.

The occupational roles of the 804 participants in this study fell into one of six occupational areas describing the function of their work, and one of four classification or stratification levels describing their supervisory status. The six occupational areas included: (a) Technical (e.g., engineering, geosciences, research and development, or information technology) ( $n = 328$ , 40.8%), (b) Business (e.g., finance, accounting, or tax) ( $n = 155$ , 19.3%), (c) Human Resources (e.g., training & development, organizational consulting, recruiting, labor relations, or employee assistance) ( $n = 38$ , 4.7%), (d) Administrative (e.g., staff positions typically aligned with the head of any particular business group or department with no direct profit and loss accountability) ( $n = 83$ ,

10.3%), (e) Legal or Wellness Professionals (e.g., medical doctors, nurses, lawyers, or paralegals) ( $n = 10$ , 1.2%) and (f) Non-Exempt (e.g., support staff generally consisting of secretaries, staff assistants or technical assistants) ( $n = 118$ , 14.7%). The four classification levels included: (a) Senior Management (i.e., general managers, vice presidents, president, or CEO) ( $n = 29$ , 3.6%), (b) Middle-Management (i.e., those who have accountability for managing front line supervisors, budgets, processes, and systems within a particular unit or department) ( $n = 143$ , 17.8%), (c) Supervisory (i.e., those who manage non-exempt employees) ( $n = 95$ , 11.8%) and (d) Non-supervisory employees (i.e., personnel with no direct reporting or supervisory responsibilities) ( $n = 510$ , 63.4%).

The component of pay was added to address additional, influential job characteristics. The participants in this study reported annual, gross pay in 1000 US dollar increments. Forty-two or 5.2% of the participants were in the less than 25 range. In the 25-50 range, 279 participants or 34.7% of the sample was accounted for. One hundred and sixteen or 14.4% of the participants were in the 51-75 range. One hundred and fifty two participants or 18.9% were in the 76-100 range. In the 101-125 range there were 126 or 15.7% of the participants. Forty three of the participants or 5.3% of the sample were in the 126-150 range. Finally, 26 participants or 3.2% of the sample were in the 151 and over pay range.

### Measures

Three specific measures and a demographic profile were utilized. The order of

completion was altered to address the possible influence of order effects as a response bias (Nunnally, 1978). The instruments included a measure of the five-factor model (FFM), a multi-item measure of general job satisfaction, and a single-item measure of job satisfaction. A demographic profile (e.g., age, gender, position in the corporation, and educational level) was also completed. Tables of frequency and percent for all demographic variables are included in Appendices H through T.

#### The Big Five Inventory: Version 44

The Big Five Inventory (BFI): Version 44 (V44) was developed by John, Donahue, and Kentle (1991). This instrument provides a thorough yet succinct measure of the five-factor model (FFM) of personality. "The 44-item English BFI (John et al., 1991) was constructed to allow efficient and flexible assessment of the five dimensions when there is no need for more differentiated measure of individual facets" (Benet-Martinez & John, 1998, p. 730). The BFI possesses substantial psychometric rigor. Alpha reliabilities ranged from .75 to .90 with an average above .80, and retest reliabilities ranged from .80 to .90 with a mean of .85 (John & Donahue, 1998). Convergent validity has been analyzed with both Costa and McCrae's (1992) and Goldberg's (1992) instruments. The BFI correlated with mean coefficients of .75 and .80 respectively. Validity of the BFI was also provided through peer-ratings with scales correlated at .47 in a college sample and at .61 across family members in an adult community sample (John & Donahue, 1998). Alpha

reliabilities in this study were .86 ( $n = 777$ ), .75 ( $n = 778$ ), .77 ( $n = 768$ ), .81 ( $n = 778$ ) and .79 ( $n = 762$ ) for Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness respectively. Means and standard deviations are in Appendices F and G.

The BFI is available from the Institute of Personality and Social Research at the University of California, Berkeley. The BFI has been previously utilized in numerous studies, including Neuberg and Newsom (1993), Cialdini, Trost, and Newsom (1995), Gross and John (1995), Johnson and Wolfe (1995), and Benet-Martinez and John (1998).

#### General Job Satisfaction

Hackman and Oldham (1974, 1975, 1980) developed the Job Diagnostic Survey to provide diagnostic information for job redesign and to provide a tool to assess the people involved in these jobs. They further developed specific sub-categories of the survey to create a five item general job satisfaction scale (Hackman & Oldham, 1975). The measure consists of five items with a seven point Likert scale ranging from strongly disagree to strongly agree. A mean response is utilized as the overall score. Internal consistency reliability was reported as .76 with a mean of 4.62 ( $SD = 1.18$ ). In a meta-analysis presented by Fried and Ferris (1987), reliability was reported with a range of .65 to .95 and a mean of .82. More recently, Renn, Swiercz, and Icenogle (1993) reported reliability information for this scale at  $\alpha = .77$ . Cook, Hepworth, Wall, and Warr (1981) provided an in-depth review of the measure and references of other studies using the

measure, including a British replication study by Wall, Clegg, and Jackson (1978). Alpha reliability in this study was .81 with a mean of 4.72 ( $SD = 1.21$ ) ( $N = 803$ ).

### A Single-Item Measure of Job Satisfaction

Questions of reliability seem to plague the single-item measurement of job satisfaction (Wanous & Reichers, 1994). However, Scarpello and Campbell (1983) have emphasized the appropriateness of using single-item measures in the rating of job satisfaction. Wanous and Reichers (1994) reported that single-item measurement of job satisfaction showed statistically significant Pearson product-moment correlations across occupational choice (.40), career progression (.42), and global life off the job satisfaction (.32). Wanous, Reichers, and Hudy (1997) presented a meta-analysis of single-item measures of overall job satisfaction in relation to scales measuring overall job satisfaction. They reported an average uncorrected correlation of .63 ( $SD = .09$ ). They stated that "The use of single-item measures should not be considered fatal flaws in the review process...Future research should be directed toward examining the validity and reliability of other single-item measures" (Wanous et al., 1997, pp. 250-251). It should be noted however, that Loo and Kells (1998) questioned the reliability of single-item measures of job satisfaction. They reported a minimum reliability of .45 and were less than enthusiastic about supporting single-item measurement of job satisfaction. In this study the correlation between the single-item measure (How satisfied are you with your job in general?) and the general job satisfaction scale was .70,  $p < .01$  ( $N = 800$ ).

### Design

This study fits the category described by Gelso (1979) as a correlational field study. This design, as presented in Figure 1, provides for a high degree of external validity based on the real-world setting and participants. However, high external validity comes at a cost to internal validity. Since the variables are not manipulated and experimental controls lacking, the issue of causality is tentative at best. Inferences about the relation between variables will be discussed, but the causal inferences among variables can not be determined (Heppner, Kivlighan, & Wampold, 1992). Multiple independent variables were used, including the five personality factors, gender, age, education, marital status, race/ethnicity, years with the corporation, years in the present job, and pay. The dependent variable was job satisfaction as presented by the general job satisfaction measure previously described.

### Procedure

Two different survey formats were used in the collection of data for this study. Format one had the participants complete the demographic information first, the personality measure (i.e., BFI (V44)), and the job satisfaction questionnaire last. In format two, the personality and job satisfaction portions were reversed (i.e., job satisfaction followed by personality). The change in format was utilized to control for the possibility of response bias due to a common-method or single format of data collection (Nunnally,

1978). T-Test analysis was completed on the FFM variables and the general job satisfaction measure.

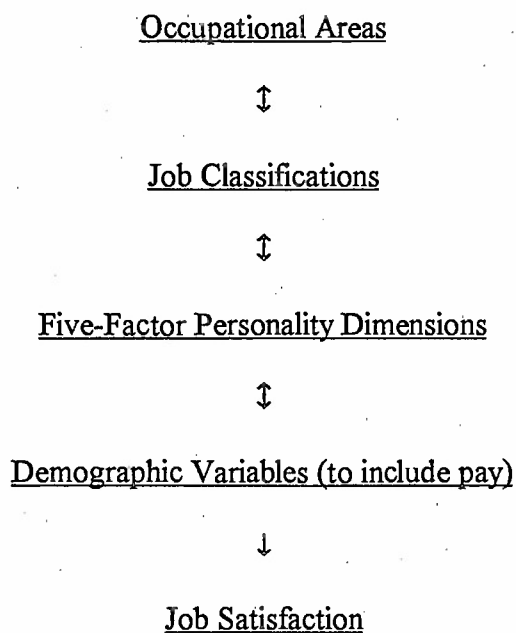


FIGURE 1. Categorization of Participants and Research Design

As shown in Table 1 only the Openness factor showed a statistical significance at  $p < .001$ . It appears though that this may have been an artifact of the large sample size ( $N = 801$ ) based upon the means of 3.57 ( $SD = .60$ ) and 3.71 ( $SD = .59$ ) across the two formats. It therefore appears that the differences between formats may have been due to chance and that a response bias based upon a single format was not present.

TABLE 1. Independent Samples T-Test Between Questionnaire Formats

Variable	t	df	Significance (2-tailed)
Agreeableness	-.238	799	.812
Conscientiousness	-1.715	799	.087
Neuroticism	-.171	799	.864
Openness	-3.272	799	.001
Extraversion	-1.215	799	.225
Job Satisfaction	.131	801	.896

Note: Equal variances assumed.

The analysis of the data, as presented in Chapter IV, will first introduce the relation between job satisfaction and dispositional variables. The correlations will be presented across and within the sub-groups as defined by occupational areas and job classifications. Stepwise regression analysis will then be utilized to examine the multivariate effects in the same sub-groups and the overall participant pool. Stepwise regression was selected as the means for analysis in this area due to the fact that previous research did not offer a strong case for ordering variables (Wampold & Freund, 1987).

## CHAPTER IV

### RESULTS

#### Correlational Analyses

The relation between job satisfaction and personality variables, as measured by the five-factor model (FFM) of personality, was examined by the using a correlational analysis. The correlations are presented in Tables 2 and 3, and include the overall sample as well as a breakdown by job classification and occupational area. Intercorrelational matrices for the FFM and demographics are included as Appendices D and E.

There was a negative and statistically significant correlation between Neuroticism and job satisfaction in all but one of the areas examined, the Non-exempt employees category. Thus, Neuroticism was significantly correlated to job satisfaction in ten of eleven occupational categories. Four correlations reached a level of .49 or greater (.49 within the Administrative area, .56 in Human Resources, .93 in Legal/Wellness, and .72 in the Senior Management level of job classifications). Many other relations were fairly strong regardless of the sample size in the area examined. It would appear that emotional stability is an important factor in job satisfaction across and within all occupational roles.

The domain of Openness provided an extremely different picture than the one that emerged with the Neuroticism factor. Openness was statistically significant in only one

TABLE 2. Correlation Coefficients for the General Job Satisfaction Measure and the Five-Factor Model  
For the Combined Sample and for Four Levels of Job Classification

Categories	Agreeableness	Conscientiousness	Extraversion	Neuroticism	Openness
All ( <i>n</i> = 803)	.18**	.11**	.17**	-.30**	.05
Senior Management ( <i>n</i> = 28)	.33	.64**	.41*	-.72**	.10
Middle Management ( <i>n</i> = 143)	.13	.13	.22**	-.28**	-.04
Supervisory ( <i>n</i> = 95)	-.04	.08	.26*	-.24*	-.12
Non-supervisory ( <i>n</i> = 509)	.24**	.10*	.10*	-.28**	-.05

\**p* < .05. \*\**p* < .01.

TABLE 3. Correlation Coefficients for the General Job Satisfaction Measure and the Five-Factor Model for Six Occupational Areas

Categories	Agreeableness	Conscientiousness	Extraversion	Neuroticism	Openness
Technical ( $n = 328$ )	.13*	.14*	.18**	-.31**	.01
Business ( $n = 155$ )	.13	.12	.12	-.24**	-.18*
Human Resources ( $n = 38$ )	.23	-.15	.32	-.56**	-.14
Administrative ( $n = 83$ )	.25*	.19	.14	-.49**	.09
Legal/Wellness ( $n = 9$ )	.20	.22	.15	-.93**	.09
Non-exempt ( $n = 118$ )	.31**	.10	.15	-.16	-.12

\* $p < .05$ . \*\* $p < .01$ .

sub-group, the Business occupational area, with a correlation of  $-.18$  ( $p < .05$ ). Other correlations ranged from a  $.10$  to a  $-.14$ . In the overall sample Openness was not significantly correlated with job satisfaction ( $r = .05$ ) and was the only domain of the FFM to not reach statistical significance.

The remaining FFM domains were not consistently related to job satisfaction. Extraversion was statistically significant for all four job classification levels ( $.41$  for Senior Management,  $.22$  for Middle Management,  $.26$  for Supervisory, and  $.10$  for Non-supervisory) and the total sample ( $.17$ ). However, only one of the six occupational areas, Technical, ( $r = .18$ ) reached significance. There was a positive and statistically significant correlation between Conscientiousness and four of the eleven areas examined. Two of these categories were by job classification ( $.64$  in the Senior Management area and  $.10$  in the Non-supervisory area) and one category was in an occupational area ( $.14$  in the Technical level). Additionally, in the overall sample Conscientiousness was significantly correlated with job satisfaction ( $r = .11$ ). For the domain of Agreeableness, five of the eleven areas examined showed a statistically significant relation to job satisfaction ( $.18$  for all participants,  $.24$  for Non-supervisory,  $.13$  for Technical,  $.25$  for Administrative, and  $.31$  for Non-exempt). Interestingly the relation between the distinct FFM domains and job satisfaction appeared to differ based upon both job classification and occupational area investigated.

Additionally, the difference between correlational coefficients was tested using a transformed Fisher Z analysis as presented by Glass and Hopkins (1984). Across job classifications and occupational areas no significant differences were found for the

Openness or Extraversion factors. For the Conscientiousness factor, significant differences were only found between the job classifications of Senior Management and Middle Management ( $z = 2.89, p < .01$ ), Senior Management and Supervisory ( $z = 3.01, p < .01$ ), and Senior Management and Non-supervisory ( $z = 2.92, p < .01$ ). For the Agreeableness factor, significant differences were found between the Supervisory and Non-supervisory areas ( $z = 2.51, p < .05$ ), the Technical and Non-exempt categories ( $z = 4.16, p < .001$ ), and for the Administrative and Non-exempt categories ( $z = 3.96, p < .001$ ). Finally, for the Neuroticism factor, significant differences were found between Senior Management and Middle Management ( $z = -2.86, p < .01$ ), Senior Management and Supervisory ( $z = -2.94, p < .01$ ), Senior Management and Non-supervisory ( $z = -3.03, p < .01$ ), the Business and Human Resources areas ( $z = -2.07, p < .05$ ), the Business and Administrative areas ( $z = -2.11, p < .05$ ), and the Human Resources and Non-exempt areas ( $z = -2.44, p < .05$ ). Overall it appears that for Conscientiousness and Neuroticism the differences for the Senior Managers add to the understanding of these dimensions in relation to job satisfaction.

The next step in data analysis involved addressing the relation between job satisfaction and demographic variables, such as pay. These analyses reviewed the overall data from the sample and the sub-categories--job classifications and occupational areas. The correlation matrix for these analyses are presented in Tables 4 and 5, and furnish an interesting analysis of the relation between these factors and job satisfaction.

Across this analysis the relation between job satisfaction and the demographic categories was quite small. For example, Pay was the only variable that was significantly

TABLE 4. Correlation Coefficients for the General Job Satisfaction Measure and Demographic Variables for the Combined Sample and Four Levels of Job Classification

Categories	Age	Education Status	Gender	Marital Status	Pay	Race/Ethnicity	Years with this company	Years in present job
All ( $n = 803$ )	.04	.01	.02	-.04	.07*	-.06	-.03	-.01
Senior Management ( $n = 28$ )	.59**	.30	.03	-.04	.34	-.31	.23	.28
Middle Management ( $n = 143$ )	.10	-.13	-.01	.02	-.10	-.08	-.01	.06
Supervisory ( $n = 95$ )	-.02	-.01	.18	.07	-.02	.03	-.14	-.11
Non-supervisory ( $n = 509$ )	-.01	-.06	.04	-.04	-.02	-.04	-.08	.01

\* $p < .05$ . \*\* $p < .01$ .

TABLE 5. Correlation Coefficients for the General Job Satisfaction Measure and Demographic Variables for Six Occupational Areas

Categories	Age	Education Status	Gender	Marital Status	Pay	Race/Ethnicity	Years with this company	Years in present job
Technical (n = 328)	-.01	.05	.09	-.01	.09	-.08	-.09	-.05
Business (n = 155)	.16	-.01	-.08	-.06	.12	-.14	.11	.02
Human Resources (n = 38)	-.04	-.10	-.16	-.25	.20	-.10	.06	.04
Administrative (n = 83)	.19	.04	-.16	-.33**	.13	.06	.13	.16
Legal/Wellness (n = 9)	-.51	.50	.59	.59	.31	-.12	-.33	-.22
Non-exempt (n = 118)	-.15	-.03	.03	.01	.19*	.10	-.18	-.15

\*p < .05. \*\*p < .01.

correlated with job satisfaction for the overall sample ( $r = .07, p < .05$ ). Clearly this variable showed the strongest relation with the dependent variable. Only three other variables reached statistical significance across all of the job classification and occupational area categories.

For members of Senior Management only Age was significantly correlated with job satisfaction ( $r = .59, p < .01$ ). Three other variables reached a correlation of plus or minus .30 or greater (i.e., Education Status = .30, Pay = .34, Race/Ethnicity = -.31), but did not attain significance. This was probably due to fairly small sample size ( $n = 28$ ). In the Human Resources occupational set, marital status reached a significant correlation of -.33 ( $p < .01$ ) with job satisfaction. This data suggest that married employees in Human Resources have a higher level of job satisfaction than those not married. The Non-exempt area presented a significant correlation with Pay at .19 ( $p < .05$ ). Although it was statistically significant, the strength of the relation was quite small. Interestingly, the Legal/Wellness occupational group had five variables that were relatively strong in their relation to job satisfaction (i.e., Age = -.51, Education Status = .50, Gender = .59, Marital Status = .59). However, none reached statistical significance due to the small sample size ( $n = 9$ ).

Overall the relationships between job satisfaction and the demographic variables were limited at best. Although the occupational area of Legal/Wellness professionals appeared intriguing, the small sample size cast considerable uncertainty about the meaning of these correlations.

In conclusion, the data provide an interesting focus on the dispositional factors influencing job satisfaction. The strength of numerous domains of the FFM in relation to job satisfaction can not be overlooked. Additionally, the lack of significant correlations between demographic variables and job satisfaction was somewhat unexpected. Overall, the correlational analyses provided unique information, specifically considering the FFM domain of Neuroticism within the different job classifications and occupational areas.

### Regression Analyses

Stepwise regression analysis was used to examine the combined contributions of the FFM, demographic variables, and pay to job satisfaction. As previously addressed, stepwise regression analysis was utilized due to the inconsistent findings of previous empirical studies. Therefore, the case for ordering variables, as in a hierarchical analysis was not appropriate (Wampold & Freund, 1987). The same sequence of statistical testing used in the correlational analysis was pursued in this area. Thus, the overall sample of participants was first examined, followed by the sub-groups of job classifications and occupational areas.

Table 6 presents the multiple regression analysis for the overall set of participants including all variables. Four of the five FFM variables (Neuroticism, Extraversion, Openness, and Agreeableness) combined to account for 14% of the explained variance. Although the category for Pay was statistically significant ( $p < .001$ ) it did not change the amount of variance explained in the model. Additionally, although personality accounts for

14% of the variance, a single factor, Neuroticism, accounts for 10%. The other variables that contribute to the regression model contribute little in the overall understanding of job satisfaction.

TABLE 6. Stepwise Multiple Regression Analysis  
for All Variables and Job Satisfaction  
in the Overall Subject Group

Model	$R$	$R^2$
1	.31	.10
2	.33	.11
3	.36	.13
4	.37	.14
5	.38	.14

Note:  $p < .001$ ,  $N = 800$ .

1 = Neuroticism

2 = Neuroticism, Extraversion

3 = Neuroticism, Extraversion, Openness

4 = Neuroticism, Extraversion, Openness, Agreeableness

5 = Neuroticism, Extraversion, Openness, Agreeableness, Pay

The stepwise multiple regression analysis was applied to each of the four job classification areas. Across these analyses, three of the four job classification sub-groups shared the initial pattern presented in the overall combined participant analysis.

Neuroticism was the dominating factor. In the Senior Management job area the multiple  $R^2$  for predicting job satisfaction was .52 ( $p < .001$ ) for Neuroticism alone. It increased to

.63 ( $p < .001$ ) when Age was added to the equation. In the Middle Management job classification group 18% of the variance was accounted for by Neuroticism. The multiple  $R^2$  increased to .24 ( $p < .001$ ) when Extraversion was affixed to the model. For Non-supervisors, Neuroticism accounted for 8% of the variance, increasing to 10% and 11% as Agreeableness and Openness were added respectively to the model. Finally, in the Supervisory job classification Extraversion was the only factor that contributed to the predictive model at  $R^2$  of .11 ( $p < .01$ ). For all of these job classifications the explained variance was accounted for by very few variables. Adding additional variables to the equations provides no incremental benefit in predicting job satisfaction.

Moving on to the analysis of occupational areas, Neuroticism continued to be the dominant factor in the regression modeling. Of the six groups in this area, Neuroticism was the primary predictive factor in five of these six occupational sub-groups. In the Technical occupational area Neuroticism accounted for 10% of the explained variance. Extraversion was the only other significant contributor increasing the multiple  $R^2$  to .12 ( $p < .001$ ). In the Business occupational division, Neuroticism was the main contributor with the multiple  $R^2$  at .10 ( $p < .001$ ). Additional variance was accounted for by Openness (increasing the  $R^2$  to .16,  $p < .01$ ), Extraversion ( $R^2$  to .20,  $p < .05$ ) and Age ( $R^2$  to .22,  $p < .05$ ). In the Human Resources occupational area Neuroticism was the only significant predictor, accounting for 31% of the explained variance ( $p < .001$ ). In the Administrative occupational sub-group Neuroticism accounted for 22% of the explained variance ( $p < .001$ ). Additionally for this group, Marital Status and Years in present job increased the explained variance ( $R^2$ ) to .28 ( $p < .05$ ) and .33 ( $p < .05$ ), respectively. The

Legal/Wellness occupational group had a huge portion of the explained variance predicted by Neuroticism ( $R^2$  of .87,  $p < .001$ ). However, the small sample size of the group ( $n = 9$ ) renders this finding rather suspect. Finally, in the Non-exempt employee occupational area Neuroticism had no contributing influence on the regression model. In this group, Agreeableness was the predominant factor at  $R^2$  of .11 ( $p < .01$ ). Two other factors helped predict job satisfaction within this group, Years with this company at  $R^2$  of .15 ( $p < .01$ ), and Pay at  $R^2$  of .20 ( $p < .05$ ).

Looking at all of the stepwise regression models, the FFM domain of Neuroticism had the most consistent relation with job satisfaction. In eight of the ten sub-categories of participants and in the overall participant group, Neuroticism was clearly the main contributor to the explained variance in understanding job satisfaction. Further, no other personality or demographic characteristic emerged as a consistent, additional predictor of job satisfaction. In the regression analyses, Neuroticism essentially stands alone as the primary predictor of job satisfaction. However, other dispositional variables do appear to have an important relationship to job satisfaction in specific job classifications and occupational areas.

#### Additional Analyses

Some investigators proposed that a single-item measure of job satisfaction provides a measure with optimal content validity. However, one item has lower reliability. The minimum reliability of a single item for the measurement of job satisfaction, in this

instance, was provided by Nunnally (1978, p. 220) as the "correction" for attenuation. Wanous and Reichers' (1994) formula was utilized here to continue to expand the empirical understanding of single item measurement theory assessing the domain of job satisfaction.

The correction for attenuation formula is " $r_{xy} = r_{xy} / [ (r_{xx}) (r_{yy}) ]^{1/2}$ ", where  $r_{xy}$  = correlation between x and y;  $r_{xx}$  = reliability of variable x;  $r_{yy}$  = reliability of y; and  $r_{xy}$  = estimated 'true' correlation between x and y if both variables had been perfectly measured" (Wanous & Reichers, 1994, p. 7). In this study the x variable, the reliability coefficient of the general job satisfaction, was .81. The y variable represents the single item measure of job satisfaction. The correlation between the general job satisfaction measure and the single item measure ( $r_{xy}$ ) utilizing the total participants ( $N = 800$ ) was .70 ( $p < .01$ ). If the assumption that the true estimated correlation between the general job satisfaction scale and the single item measure, when both variables had been perfectly matched, was equal to 1.00, the resulting estimated reliability for the single item measure ( $r_{yy}$ ) would be .61. Table 7 presents the correlation between the general job satisfaction measure and the single-item measure, with the resulting estimated reliabilities, for the four job classifications and the six occupational areas.

Nine of the ten sub-groups had significant correlations greater than .50. The resulting estimated reliabilities exceeded .50 for eight of the ten groups. Additionally, if the true correlation were to equal a lower value, such as .90, the resulting reliability for the single item measure would be .76 utilizing the total sample. These findings were

Table 7. Correlations Between the General Job Satisfaction Measure and the Single-Item Measure with Resulting Estimated Reliabilities ( $r_{yy}$ )

Categories	$r$	$r_{yy}$
Senior Management ( $n = 29$ )	.30	.11
Middle Management ( $n = 140$ )	.82**	.83
Supervisory ( $n = 95$ )	.66**	.53
Non-supervisory ( $n = 509$ )	.70**	.61
Technical ( $n = 327$ )	.71**	.62
Business ( $n = 153$ )	.67**	.55
Human Resources ( $n = 38$ )	.84**	.86
Administrative ( $n = 83$ )	.76**	.71
Legal/Wellness ( $n = 9$ )	.70*	.61
Non-exempt ( $n = 118$ )	.55**	.37

\* $p < .05$ . \*\* $p < .01$ .

consistent with those presented by Wanous and Reichers (1994), Wanous and Reichers (1996), and Wanous et al. (1997).

## CHAPTER V

### DISCUSSION

The purpose of this study was to examine the utility of the five-factor model (FFM) of personality as a tool for better understanding of job satisfaction. The FFM is comprised of the domains of Neuroticism, Extraversion, Agreeableness, Conscientiousness, and Openness. The research questions focused on the relation between dispositional factors (e.g., personality, age, gender) and job satisfaction over a large, somewhat diverse group and within specific occupational areas and job classifications.

#### Research Questions

The first area of investigation highlighted the FFM variables in relation to job satisfaction. Previous research (e.g., Furnham & Zacherl, 1986; Organ & Lingl, 1995; Sterns et al., 1983) yielded mixed results in understanding the relation between job satisfaction and the FFM. However, these studies did show some consistency in finding a relation between Neuroticism and job satisfaction. This study supported the relation between job satisfaction and the FFM variable of Neuroticism. When considering the data across the full participant group, Neuroticism was significantly, but only moderately related to job satisfaction and it accounted for 10% of the variance in the multiple regression model. Additionally, it was very interesting to find that Neuroticism was

statistically significant in all but one of the six occupational areas and all of the four job classification areas in this study.

Based upon these findings, it is important to consider the emotional stability (i.e., Neuroticism) of an individual in considering job satisfaction. Such information is particularly relevant to applied situations, including, but not limited to, job satisfaction and occupational selection (Holland, 1985a). That is to say, an individual considering the possibility of changing employment should first consider how their present emotional perspective contributes to the decision making process. Although McCrae and Costa (1990), and Costa and McCrae (1994) emphasized the stability of adult personality, the possibility of life stressors influencing an individual's emotional stability should not be overlooked. Since Neuroticism contributed in a fairly substantial fashion to the understanding of job satisfaction across occupational groups and in different job classifications, this domain therefore contributes an important aspect of vocational counseling that may have been overlooked in the past (Costa, McCrae, & Kay, 1995).

It is interesting to note at this point that Gelso and Fretz (1992), and Herr and Cramer (1992) emphasized a holistic approach to the process of vocational counseling. Specifically, Herr and Cramer (1992) after reviewing numerous career decision-making models, focused on affect or emotion as a key fundamental area that must be understood to help an individual in the process of career selection. The utilization of the FFM would therefore provide additional insight for this process, particularly through the domain of Neuroticism, in assessing the emotional stability of individuals considering vocational decisions. Thus, the utilization of the NEO PI-R (Costa & McCrae, 1992) in addition to

Holland's Self Directed Search (Holland, 1985c) would be expected to provide critical information to career counselors, ultimately aiding their client's search for job satisfaction.

Although Neuroticism was the major component in understanding job satisfaction, other FFM variables also contributed to an increased understanding in this arena. In fact all of the FFM variables, with the exception of Openness, were significantly related to job satisfaction. Interestingly, in the multiple regression analysis Openness was a contributing factor, although the addition of Extraversion, Openness, and Pay in the stepwise regression only represented an additional 4% of the variance accounted for in the model.

If specific occupational areas and job classifications were not addressed, an interesting part of the story of the relation between job satisfaction and dispositional variables would be lost. In the job classification category of Senior Management, Conscientiousness, Age, and Extraversion were all strongly related to job satisfaction. When addressed in the stepwise regression model Conscientiousness added an additional 8% to the accounted for variance to Neuroticism as discussed earlier. This appears to be an admirable finding in some respects, since the decision making emphasis of a corporation might well be a major component for senior management. Thus, Conscientiousness, which measures a rational competent demeanor, may lead to increased job satisfaction in this specific classification. In the Middle Management sub-group only Extraversion added to the understanding of job satisfaction. With a correlation of .22 ( $p < .01$ ) and an addition of 4% of the variance accounted for in the regression model, Extraversion added to the understanding of the relation between job satisfaction and dispositional variables. In the Non-supervisory category Agreeableness and Openness

combined to account for only an increase of 3% of the explained variance in the regression model. Finally, in the Supervisory group, where Neuroticism did not account for significant variance in the regression model, Extraversion and Openness accounted for 7% and 4% respectively, of the explained variance in the model.

Across the occupational areas the FFM variables continued to enhance the understanding of the relation to job satisfaction and dispositional variables. Specifically, Extraversion, Openness, and Agreeableness contributed to the explained variance across different occupational areas. For example, in the Business category, Openness and Extraversion contributed 6% and 4% respectively to the explained variance in the model. While in the Non-exempt occupational area all of the significant variance, 10%, was accounted for by Agreeableness. Finally, other dispositional variables such as Age, Marital Status, and Years on the Job, contributed in unique ways within specific occupational groups to the variance accounted for in job satisfaction. Specifically, in the area of Legal/Wellness Professionals, Marital Status and Years on the Job contributed 6% and 5% of the explained variance, respectively. Additionally, in the Business occupational category, age contributed 2% of the explained variance in the model. Therefore, it would appear that the addition of some more specific dispositional variables must be considered in a occupational specific context to understand the relation of these variables to job satisfaction.

Interestingly, Costa, et al. (1995) presented the development of The NEO Job Profiler, to address the unique aspects of the FFM to specific occupations. This study appeared to confirm the need to invoke distinct vocational choice decisions with the FFM

by understanding the components of personality that might contribute to satisfaction in an unusual manner. Focusing on the FFM, in general, across vocational areas might not be the best utilization of enhancing the power of understanding in the arena of vocational choice.

The final discussion area addresses the question of the single-item measures of job satisfaction. The correlation between the five item job satisfaction measure (Hackman & Oldham, 1975) and the single-item measure for the overall subject group was .70 ( $p < .01$ ). Within each of the four job classification areas and the six occupational areas, the correlations between measures ranged between .30 (nonsignificant) and .84 ( $p < .01$ ). Six of these ten areas resulted in achieving correlations .70 or greater. Only the Senior Management job classification area with a .30 correlation did not achieve significance. Review of the data and analysis in this area did not lend to answering why this unique relation was found for only this one group. Nonetheless it is interesting to note, utilizing Nunnally's (1978) correction for attenuation formula, that the findings in this study were consistent with those reported by Wanous and Reichers (1994), Wanous and Reichers (1996) and Wanous et al. (1997). It would therefore seem that although not always the preferred method for collection of information to understand the construct of job satisfaction, single-item measures do provide the possibility of important information that should not be discarded. The emphasis must be placed upon utilizing clear and concise single-item measures only when the situation dictates.

### Limitations and Future Research Considerations

The major limitation to this study was the inability to establish causation due to the correlational design utilized. Therefore, inferences of causality were inappropriate. That is not to say that the findings presented are not without merit. Although the relation between certain dispositional variables and job satisfaction was apparent, the direction of influence is not. For example, does heightened Neuroticism cause lower job satisfaction or does lower job satisfaction lead to heightened Neuroticism? While an answer may seem intuitively obvious, the question was unanswerable in this study. Thus, the lack of manipulation of variables begs for the possibility of utilizing a more controlled experimental design to understand the directional influence between job satisfaction and personality dimensions. Additionally, the use of structural equation modeling could lead to increased understanding of the possible direction of influence between job satisfaction and personality (Fassinger, 1987).

Another limitation was based upon the measures utilized. Although the focus of this study was on the five main domains of the FFM, it could be argued that using more detailed facet areas within each domain would contribute additional understanding. Recently, Costa (1996) emphasized the utilization of the 30 facet areas, six in each of the FFM five domains, to better understand the effects of personality in the workplace. The more comprehensive information provided by all the facet areas of the FFM may contribute greatly to the specific aspects of the relation to job satisfaction. For example, the domain of Neuroticism is comprised of Anxiety, Angry Hostility, Depression, Self-

Consciousness, Impulsiveness, and Vulnerability (Costa & McCrae, 1992). It may be the case that Depression and Anxiety might lead to lower job satisfaction, while Impulsiveness has relatively little relation to this same construct. Future research should therefore utilize the addition of facet specific scores to increase the overall understanding of the relationship between job satisfaction and personality. Additionally, the measure of overall job satisfaction and the relation to dispositional variables might be enhanced through more specific measures of job satisfaction. For example, the utilization of the Job Descriptive Index (Smith, et al., 1969) which provides specific satisfaction scores for pay, work, promotion, supervision, and coworkers, might provide a more precise understanding of the FFM dispositional influences. Again, the expansion of variables might lead to increased understanding, but might also lead to a misunderstanding, in the applied sense, of vocational choice and the relation to job satisfaction.

There are several issues related to the participants that creates limitations to this study. Since all participants were members of a single corporation, the generalizability of this study is limited. The possibility of "cultural" implications from a single corporation could influence the findings presented. Although this begs for continued research across different corporations and businesses, it should be noted that the individual differences discussed in the relation of job satisfaction and the FFM may not be unique to this one corporate setting. In other words, dismissing the strong relation between job satisfaction and Neuroticism due to the participants of this study seems unwise. An additional limitation concerning the participants of this study was the somewhat small sample sizes in specific job classifications and occupational areas. Additionally, some demographic

variables, such as Race/Ethnicity, were limited in participant diversity. In this case, approximately 83% of the sample were characterized as White/Caucasian. A more diverse sample could lead to an increased understanding in the area of individual differences in relation to job satisfaction. Also, the job classifications and occupational areas of this corporation might not have been representative of "corporate America" as a whole and did not appear to align with Holland's typology. Nonetheless, this is one of the first studies that considered the influences of different job classifications and occupational areas in understanding the FFM in relation to job satisfaction.

Additionally, the concern of mono method bias as addressed by Cook and Campbell (1979) must be considered. This study utilized self-report measures for the FFM domains of personality and job satisfaction. Although the order of completion of the surveys was manipulated, as discussed in Chapter III, no other means to assess job satisfaction or personality were utilized. Future studies might therefore incorporate the use of observer ratings for assessing personality and focus on the relation between self and observers' ratings (Funder & West, 1993) to minimize the possibility of self-report, mono method bias.

### Conclusions

The findings in this research point toward a need to incorporate the FFM in a comprehensive analysis of job satisfaction. On one hand, the relation between Neuroticism and job satisfaction can not be overlooked. This is especially true given that personality

stability appears to be an adult phenomenon that can influence satisfaction in the workplace (McCrae & Costa, 1990; Costa & McCrae, 1994). Additionally, this is important because it gives some indication of the possible direction of causation in this area. That is, emotional stability may indeed lead to increased job satisfaction. Failure to use the FFM neglects important information in helping an individual with a major life decision. On the other hand, ethical counseling can not be pursued in a vacuum of a single domain to personality, namely the area of understanding Neuroticism. This lends the focus toward continued research in the utilization of the full five-factor model in the process of vocational counseling.

Additionally, as much as this study focused on six different occupational areas and four specific job classifications, the results must be interpreted as more of a beginning, versus the final answer in the interactional perspective between disposition and situation. What other variables might enhance this interactional perspective beyond those considered here? Could the influence of location in the global economy, for example, be a misunderstood component in the world of work today that might change the understanding of job satisfaction into the next century? The plethora of possibilities seems to necessitate the continued study of this topic from such diverse perspectives and toward the extension of the understanding of the construct of job satisfaction.

An additional issue of utilization of single-item measures remains one of concern from both a practitioner and scientist perspective. The balance might be that since the practitioner side has a need to utilize this form of measurement, that the researcher has the responsibility to continue to empirically evaluate this area.

Perhaps the insight provided by Parsons (1909) almost a century ago is timeless in simplicity, yet endless in the quest of knowledge in vocational counseling. Likewise, Gelso and Fretz (1992) continued to emphasize the use of interactional models as a major theme in counseling psychology, specifically in the vocational understanding arena. Perhaps the time has come to return to the past with a fresh outlook through the five-factor model, allowing for a continued enhancement of the process of vocational choice and the hope for a resultant increase in the understanding of job satisfaction.



- \_\_\_\_\_ Education:
1. High school or equivalent
  2. Associate degree or trade school completed
  3. Bachelors degree
  4. Masters degree
  5. Doctoral or professional degree

\_\_\_\_\_ Present Annual (gross) Pay Range (in 1000 dollar increments):

1. Less than 25
2. 25-50
3. 51-75
4. 76-100
5. 101-125
6. 126-150
7. 151 or more

\_\_\_\_\_ Years with This Corporation:

1. less than 1
2. 1-4
3. 5-9
4. 10-14
5. 15-19
6. 20 or more

\_\_\_\_\_ Years in Present Job:

1. less than 1
2. 1-4
3. 5-9
4. 10-14
5. 15-19
6. 20 or more

\_\_\_\_\_ Occupational Area:

1. Technical
2. Business (ABS, Finance, etc.)
3. Human Resources
4. Administrative
5. Legal/Wellness Professionals
6. Non-exempt

Job Title: \_\_\_\_\_

\_\_\_\_\_ Job Classification:

1. Senior Management
2. Middle-management
3. Supervisory (front-line)
4. Non-supervisory responsibilities

Please check: Did you write a number in each question?

Thank you.

## APPENDIX B

## BIG FIVE INVENTORY:

## VERSION 44

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who likes to spend time with others? Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

Disagree	Disagree	Neither agree	Agree	Agree
strongly	a little	nor disagree	a little	strongly
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>

I see Myself as Someone Who...

- |   |   |
|---|---|
| <u>1</u> . Is talkative                         | <u>23</u> . Tends to be lazy                        |
| <u>2</u> . Tends to find fault with others      | <u>24</u> . Is emotionally stable, not easily upset |
| <u>3</u> . Does a thorough job                  | <u>25</u> . Is inventive                            |
| <u>4</u> . Is depressed, blue                   | <u>26</u> . Has an assertive personality            |
| <u>5</u> . Is original, comes up with new ideas | <u>27</u> . Can be cold and aloof                   |
| <u>6</u> . Is reserved                          | <u>28</u> . Perseveres until the task is finished   |
| <u>7</u> . Is helpful and unselfish with others | <u>29</u> . Can be moody                            |
| <u>8</u> . Can be somewhat careless             | <u>30</u> . Values artistic, aesthetic experiences  |

Disagree strongly 1	Disagree a little 2	Neither agree nor disagree 3	Agree a little 4	Agree strongly 5
---------------------------	---------------------------	------------------------------------	------------------------	------------------------

- |   |   |
|---|---|
| __ 9. Is relaxed, handles stress well         | __ 31. Is sometimes shy, inhibited                |
| __ 10. Is curious about many different things | __ 32. Is considerate and kind to almost everyone |
| __ 11. Is full of energy                      | __ 33. Does thing efficiently                     |
| __ 12. Starts quarrels with others            | __ 34. Remains calm in tense situations           |
| __ 13. Is a reliable worker                   | __ 35. Prefers work that is routine               |
| __ 14. Can be tense                           | __ 36. Is outgoing, sociable                      |
| __ 15. Is ingenious, a deep thinker           | __ 37. Is sometimes rude to others                |
| __ 16. Generates a lot of enthusiasm          | __ 38. Makes plans and follows through with them  |
| __ 17. Has a forgiving nature                 | __ 39. Gets nervous easily                        |
| __ 18. Tends to be disorganized               | __ 40. Likes to reflect, play with ideas          |
| __ 19. Worries a lot                          | __ 41. Has few artistic interests                 |
| __ 20. Has an active imagination              | __ 42. Likes to cooperate with others             |
| __ 21. Tends to be quiet                      | __ 43. Is easily distracted                       |
| __ 22. Is generally trusting                  | __ 44. Is sophisticated in art and music          |

Please check: Did you write a number in front of each statement?

Thank You.

Scoring the BFI: (V44)

Scale name (Number of items on the scale) / Item numbers on the BFI (V44)

Extraversion (8 items)

1, 6R, 11, 16, 21R, 26, 31R, 36

Agreeableness (9 items)

2R, 7, 12R, 17, 22, 27R, 32, 37R, 42

Conscientiousness (9 items)

3, 8R, 13, 18R, 23R, 28, 33, 38, 43R

Neuroticism (8 items)

4, 9R, 14, 19, 24R, 29, 34R, 39

Openness (10 items)

5, 10, 15, 20, 25, 30, 35R, 40, 41R, 44

Scoring Instructions

Reverse score items marked with an R, then sum up the items on each scale and divide that sum by the number of items on that scale.

## APPENDIX C

GENERAL AND SINGLE ITEM MEASURES OF  
JOB SATISFACTION

Please respond to the following five statements with one of these seven responses:

1. Strongly Disagree      2. Disagree      3. Slightly Disagree  
 4. Neutral      5. Slightly Agree      6. Agree      7. Strongly Agree

- \_\_\_\_\_ 1. Generally speaking, I am very satisfied with this job.  
 \_\_\_\_\_ 2. I frequently think of quitting this job.  
 \_\_\_\_\_ 3. I am generally satisfied with the type of work I do in this job.  
 \_\_\_\_\_ 4. Most people on this job are very satisfied with the job.  
 \_\_\_\_\_ 5. People on this job often think of quitting.

Please answer the final question with one of the following seven responses.

1. Extremely Satisfied      2. Satisfied      3. Slightly Satisfied      4. Neutral  
 5. Slightly Dissatisfied      6. Dissatisfied      7. Extremely Dissatisfied.

\_\_\_\_\_ How satisfied are you with your job in general?

Please check: Did you write a number in front of each statement?

Thank You.

Scoring for the General Job Satisfaction Measure

Reverse score items 2 and 5, then sum the item scores and divide by 7.

Single Item Measure Score

Utilize the single score (1 through 7) provided for this single-item.

APPENDIX D

INTERCORRELATIONAL MATRIX FOR THE FIVE-FACTOR MODEL

Factor	Extraversion	Agreeableness	Conscientiousness	Neuroticism	Openness
Extraversion					
Agreeableness	.10**				
Conscientiousness	.15**	.28**			
Neuroticism	-.22**	-.35**	-.26**		
Openness	.24**	.14**	.13**	-.18**	

n = 801, \*\*p < .01

APPENDIX E

INTERCORRELATIONAL MATRIX FOR DEMOGRAPHIC VARIABLES

Variable	A	G	P	R/E	ES	MS	YC	YJ
Age (A)								
Gender (G)	-.13**							
Pay (P)	.28**	-.38**						
Race/Ethnicity (R/E)	-.01	-.13**	.10**					
Education Status (ES)	.10**	-.24**	.69**	.06				
Marital Status (MS)	-.16**	.24**	-.06	-.17**	-.17**			
Years with this company (YC)	.51**	-.19**	.37**	.07*	.12**	-.10**		
Years in present job (YJ)	.27**	-.11**	-.15**	-.01	-.22**	-.01	.28**	

\*p < .05. \*\*p < .01.

**APPENDIX F**

**MEANS AND STANDARD DEVIATIONS FOR THE FIVE-FACTOR MODEL  
FOR THE TOTAL SAMPLE AND BY JOB CLASSIFICATION**

Variable	All n = 801		Senior Management n = 28		Middle Management n = 143		Supervisory n = 95		Non-supervisory n = 509	
	M	SD	M	SD	M	SD	M	SD	M	SD
Extraversion	3.38	.80	3.51	.83	3.56	.78	3.42	.79	3.32	.80
Neuroticism	2.42	.72	2.42	.81	2.29	.66	2.43	.71	2.45	.73
Agreeableness	4.08	.56	3.97	.44	3.98	.55	4.09	.56	4.12	.56
Openness	3.66	.60	3.66	.64	3.65	.60	3.71	.61	3.66	.59
Conscientiousness	4.22	.54	4.19	.53	4.17	.50	4.21	.56	4.23	.54

Note: Scale is 1 - 5

APPENDIX G

MEANS AND STANDARD DEVIATIONS FOR THE FIVE-FACTOR

MODEL BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
	<u>n</u> = 328		<u>n</u> = 155		<u>n</u> = 38		<u>n</u> = 82		<u>n</u> = 10		<u>n</u> = 118	
E	3.31	.79	3.40	.80	3.49	.90	3.54	.81	3.93	.54	3.38	.80
N	2.41	.69	2.41	.72	2.47	.80	2.39	.81	2.40	.63	2.45	.75
A	4.04	.55	3.99	.50	4.18	.53	4.35	.48	3.92	.71	4.12	.60
O	3.70	.54	3.52	.72	3.82	.64	3.68	.51	3.94	.62	3.67	.54
C	4.18	.54	4.14	.50	4.34	.53	4.35	.49	4.08	.60	4.31	.56

Notes: Scale is 1 - 5; E = Extraversion, N = Neuroticism, A = Agreeableness, O = Openness, C = Conscientiousness

APPENDIX H

FREQUENCY AND PERCENT FOR GENDER  
AND AGE BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
Gender												
Male	264	81.2	112	72.3	19	50.0	24	28.9	9	90.0	61	52.6
Female	64	18.8	43	27.7	19	50.0	59	71.1	1	10.0	55	47.4
Age												
18-29	16	5.0	4	2.8	2	5.4	5	6.3	1	11.1	5	4.5
30-39	67	21.0	51	36.2	2	5.4	17	21.3	0	0.0	33	30.0
40-49	164	51.4	57	40.4	22	59.5	26	32.5	6	66.7	48	43.6
50-59	70	21.9	29	20.6	10	27.0	28	35.0	2	22.2	23	20.9
60 & over	2	0.6	0	0.0	1	2.7	4	5.0	0	0.0	1	0.9

APPENDIX I

FREQUENCY AND PERCENT FOR MARITAL STATUS AND  
RACE/ETHNICITY BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
<b>Marital Status</b>												
Married	265	81.8	126	81.3	22	57.9	61	74.4	8	80.0	74	65.5
Single	59	18.2	29	18.7	16	42.1	21	25.6	2	20.0	39	34.5
<b>Race/Ethnicity</b>												
Asian American	8	2.5	1	0.7	0	0.0	2	2.5	0	0.0	1	0.9
African American	15	4.6	14	9.2	7	18.4	11	13.6	2	22.2	15	12.9
Hispanic/Latino	6	1.9	5	3.3	0	0.0	5	6.2	1	11.1	6	5.2
White/Caucasian	290	89.8	128	84.2	31	81.6	63	77.8	6	66.7	93	80.2
Other	4	1.2	4	2.6	0	0.0	0	0.0	0	0.0	0	0.0

APPENDIX J  
FREQUENCY AND PERCENT FOR EDUCATION STATUS  
BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
Education												
High school or equivalent	47	14.6	7	4.6	5	13.5	36	43.4	1	10.0	60	52.6
Associate degree or trade school	50	15.5	9	5.9	2	5.4	20	24.1	1	10.0	35	30.7
Bachelors degree	136	42.1	50	32.7	10	27.0	16	19.3	3	30.0	18	15.8
Masters degree	59	18.3	75	48.4	15	40.5	8	9.6	0	0.0	0	0.0
Doctoral or professional degree	31	9.6	12	7.8	5	13.5	3	5.0	5	50.0	1	0.9

APPENDIX K

FREQUENCY AND PERCENT FOR ANNUAL GROSS PAY

BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
Annual Gross Pay												
Less than 25	7	2.2	5	3.4	1	2.7	15	18.1	0	0.0	8	6.8
25-50	87	27.3	13	8.8	6	16.2	49	59.0	3	30.0	92	78.0
51-75	50	15.7	30	20.4	3	8.1	2	2.4	2	20.0	17	14.4
76-100	78	24.5	45	30.6	9	24.3	6	7.2	2	20.0	0	0.0
101-125	67	21.0	36	24.5	10	27.0	2	2.4	3	30.0	0	0.0
126-150	22	6.9	12	8.2	7	18.9	1	1.2	0	0.0	0	0.0
151 or more	8	2.5	6	4.1	1	2.7	8	9.6	0	0.0	1	0.8

Note: Pay ranges are in 1000 dollar increments

APPENDIX L

FREQUENCY AND PERCENT FOR YEARS WITH THIS  
CORPORATION BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
Years with this Corporation												
Less than 1	6	1.8	3	4.6	0	0.0	2	2.4	1	10.0	5	4.2
1-4	30	9.2	12	5.9	7	18.4	14	17.1	2	20.0	12	10.2
5-9	35	10.8	32	20.8	3	7.9	16	19.5	3	30.0	27	22.9
10-14	57	17.5	26	16.9	7	18.4	12	14.6	0	0.0	23	19.5
15-19	88	27.1	41	26.6	4	10.5	15	18.3	2	20.0	24	20.3
20 or more	109	33.5	40	26.0	17	44.7	23	28.0	2	20.0	27	22.9

APPENDIX M

FREQUENCY AND PERCENT FOR YEARS IN PRESENT JOB

BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
Years in Present Job												
Less than 1	66	20.9	50	32.5	5	14.3	15	19.2	1	12.5	15	12.8
1-4	141	44.6	70	45.5	24	68.6	40	51.3	2	25.0	38	32.5
5-9	57	18.0	21	13.6	2	5.7	16	20.5	3	37.5	38	32.5
10-14	26	8.2	8	5.2	2	5.7	4	5.1	1	12.5	14	12.0
15-19	14	4.4	4	2.6	0	0.0	2	2.6	1	12.5	4	3.4
20 or more	12	3.8	1	0.6	2	5.7	1	1.3	0	0.0	8	6.8

APPENDIX N

FREQUENCY AND PERCENT FOR JOB CLASSIFICATION

BY OCCUPATIONAL AREA

Variable	Technical		Business		Human Resources		Administrative		Legal/Wellness		Non-exempt	
	f	P	f	P	f	P	f	P	f	P	f	P
Job Classification												
Senior Management	5	1.6	10	6.5	2	5.4	8	10.0	1	10.0	1	0.9
Middle Management	54	16.9	52	33.8	14	37.8	9	11.3	1	10.0	1	0.9
Supervisory	58	18.2	20	13.0	2	5.4	4	5.0	1	10.0	4	3.5
Non-supervisory	202	63.3	72	46.8	19	51.4	59	73.8	7	70.0	107	94.7

APPENDIX O

FREQUENCY AND PERCENT FOR GENDER AND AGE

BY JOB CLASSIFICATION

Variable	Senior Management		Middle Management		Supervisory		Non-supervisory	
	f	P	f	P	f	P	f	P
Gender								
Male	28	96.6	120	84.5	71	74.7	301	59.5
Female	1	3.4	22	15.5	24	25.3	205	40.5
Age								
18-29	0	0.0	1	0.7	4	4.4	29	6.0
30-39	3	10.3	28	20.6	21	23.1	131	27.0
40-49	13	44.8	70	51.5	49	53.8	214	44.1
50-59	13	44.8	36	26.5	16	17.6	104	21.4
60 & over	0	0.0	1	0.7	1	1.1	7	1.4

APPENDIX P

FREQUENCY AND PERCENT FOR MARITAL STATUS AND

RACE/ETHNICITY BY JOB CLASSIFICATION

Variable	Senior Management		Middle Management		Supervisory		Non-supervisory	
	f	P	f	P	f	P	f	P
<b>Marital Status</b>								
Married	27	96.4	122	87.8	77	81.1	362	72.0
Single	1	3.6	17	12.2	18	18.9	141	28.0
<b>Race/Ethnicity</b>								
Asian American	1	3.6	3	2.1	2	2.2	6	1.2
African American	2	7.1	10	7.1	6	6.5	52	10.4
Hispanic/Latino	1	3.6	4	2.8	1	1.1	16	3.2
White/Caucasian	21	75.0	124	86.7	82	88.2	423	84.3
Other	3	10.7	0	0.0	2	2.2	5	1.0

APPENDIX Q

FREQUENCY AND PERCENT FOR EDUCATION STATUS

BY JOB CLASSIFICATION

Variable	Senior Management		Middle Management		Supervisory		Non-supervisory	
	f	P	f	P	f	P	f	P
Education								
High school or equivalent	0	0.0	1	0.7	11	11.7	163	32.6
Associate degree or trade school	0	0.0	5	3.6	7	7.4	113	22.6
Bachelors degree	13	44.8	61	43.6	43	45.7	131	26.2
Masters degree	11	37.9	59	42.1	25	26.6	63	12.6
Doctoral or Professional degree	5	17.2	14	10.0	8	8.5	30	6.0

APPENDIX R

FREQUENCY AND PERCENT FOR ANNUAL GROSS PAY

BY JOB CLASSIFICATION

Variable	Senior Management		Middle Management		Supervisory		Non-supervisory	
	f	P	f	P	f	P	f	P
Annual Gross Pay								
Less than 25	0	0.0	0	0.0	2	2.2	35	7.0
25-50	1	3.4	2	1.5	14	15.1	252	50.2
51-75	0	0.0	3	2.2	13	14.0	98	19.5
76-100	2	6.9	41	30.6	39	41.9	67	13.3
101-125	2	6.9	58	43.3	23	24.7	38	7.6
126-150	7	24.1	24	17.9	2	2.2	9	1.8
151 or more	17	58.6	6	4.5	0	0.0	3	0.6

Note: Pay ranges are in 1000 dollar increments

APPENDIX S

FREQUENCY AND PERCENT FOR YEARS WITH THIS CORPORATION

BY JOB CLASSIFICATION

Variable	Senior Management		Middle-Management		Supervisory		Non-supervisory	
	f	P	f	P	f	P	f	P
Years with this Corporation								
Less than 1	0	0.0	1	0.7	2	2.2	15	3.0
1-4	6	20.7	7	5.0	7	7.5	59	11.6
5-9	1	3.4	14	10.1	10	10.8	101	19.9
10-14	1	3.4	21	15.1	14	15.1	95	18.7
15-19	7	24.1	33	23.7	26	28.0	119	23.5
20 or more	14	48.3	63	45.3	34	36.6	118	23.3

APPENDIX T

FREQUENCY AND PERCENT FOR YEARS IN PRESENT JOB

BY JOB CLASSIFICATION

Variable	Senior Management		Middle Management		Supervisory		Non-supervisory	
	f	$\bar{P}$	f	$\bar{P}$	f	$\bar{P}$	f	$\bar{P}$
<b>Years in Present Job</b>								
Less than 1	7	25.0	44	32.6	18	19.6	87	17.7
1-4	17	60.7	69	51.1	47	51.1	195	39.7
5-9	2	7.1	13	9.6	13	14.1	118	24.0
10-14	2	7.1	6	4.4	6	6.5	45	9.2
15-19	0	0.0	1	0.7	1	1.1	28	5.7
20 or more	0	0.0	2	1.5	7	7.6	18	3.7

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