

Vocational Psychology and Personality: The Relationship of the Five-Factor Model to Job Performance and Job Satisfaction

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The use of personality inventories for selection purposes was embraced with great enthusiasm by both the American military and private corporations in the decade following the World War II (Mount & Barrick, 1995). However, many researchers soon came to view personality variables as being of little or no value to the prediction of job performance or job satisfaction. This dismissal of the value of personality testing was to span much of the next 3 decades.

In their review of the history of personality research, Mount and Barrick (1995) attribute this dismissal of personality testing to a number of factors. Among these factors were reviews of the literature that found only modest relationships between a broad range of personality scales and job performance. For example, in a review of 113 studies conducted between 1919 and 1953, Ghiselli and Bartol (1953) found an overall mean correlation of .22 between a range of personality variables and job performance. Guion and Gottier (1965) subsequently concluded that none of the personality measures then reported in the literature were useful as selection tools. Shortly thereafter, the use of personality testing for personnel selection found itself caught up in the wider "person-situation" debate in which Mischel (1968) argued that situational variables were far better predictors of behavior than were personality measures. An additional factor plaguing personality research was the sheer number of personality theories and personality inventories. Consequently, it was very difficult to equate findings across studies and to summarize research results.

Recently, there has been renewed interest in the role that personality plays in job-related performance, satisfaction, attitudes, and behaviors. In their book, *Personality in the Workplace*, Hogan and Roberts (2001) discuss four major reasons for this rediscovery of personality after so many decades of criticism. First, although cognitive assessment has long been the selection method of choice, it has come under fire for having an adverse impact on minority group members. Well-constructed personality inventories are relatively race and gender neutral, making them attractive adjuncts to cognitive assessment in the selection process.

A second reason for the renewed interest in personality measures was the emergence of the Five-Factor Model (FFM) of personality (Hogan & Roberts, 2001). The FFM provided a much needed, empirically validated schema for classifying personality measures and imposing order on the confusing mass of personality-job performance literature. The resulting order laid the foundation for new investigations of the relationship among personality and job performance and job satisfaction.

A third factor for the renewed interest in personality measures was the U.S. Army Research Institute study, "Project A" conducted in the 1980s (Hogan & Roberts, 2001). Project A investigated methods to improve the selection process for entry level army jobs. The results of this study (Hough, Eaton, Dunnette, Kamp, & McCloy, 1990) persuaded many doubters that personality assessment could be a very valuable component of the selection process.

The fourth reason for the renewed interest in personality measures was the development of increasingly sophisticated meta-analysis techniques (Hogan & Roberts, 2001). Over the last several decades, meta-analysis has evolved from a simple summing of effects sizes across studies into a complex statistical procedure requiring many well-informed decisions regarding corrections for error and bias in data sets. It is far beyond the scope of this chapter to discuss the technical aspects of meta-analysis. Suffice it to say that meta-analysis represents an objective, well-articulated method for summarizing related research findings.

The results of more recent meta-analytic reviews have been interpreted by the applied research community to suggest that personality assessments were more useful predictors of job-related behaviors than previous literature reviews had indicated. For example, a meta-analysis investigating the relationship between personality and job performance conducted by Schmitt, Gooding, Noe, and Kirsch (1984) found a mean correlation of .21 between 32 personality scales and ratings of job performance. This correlation has a very similar size to the value previously found and dismissed by Ghiselli and Barthol (1953). However, it had the advantage of having been arrived at through the use of a more sophisticated data summarization method.

Although Schmitt et al. (1984) used meta-analysis to objectively summarize research findings across a number of studies, this investigation still lacked a

parsimonious method for organizing the personality variables thus summarized. Subsequent meta-analyses (Hurtz & Donovan, 2000; Barrick & Mount, 1991; Mount & Barrick, 1995; Salgado, 1997; Tett, Jackson, & Rothstein, 1991) addressed this shortcoming by using the FFM of personality to provide a simple and theoretically coherent organizational scheme for the wide range of personality measures found in the job performance and job satisfaction literature.

In the pages that follow, we begin our exploration of the topic of vocational psychology and personality with a brief overview of the FFM of personality. We then review meta-analytic studies of personality and job performance. This is followed by a section concerning personality and job satisfaction. Finally, we conclude this chapter with a discussion of personality and well-being.

THE FIVE-FACTOR MODEL OF PERSONALITY

The FFM is currently the most widely accepted theory of the structure of personality. The origins of the FFM lay in efforts of researchers to replicate Cattell's 16-factor personality structure (Mount & Barrick, 1995). Although the researchers were unable to extract Cattell's 16 factors from their data sets, they consistently extracted a very similar set of five factors. As might be expected, in order for only five factors to describe the width and depth of human personality, each factor has to be quite broad.

Given the breadth of these factors, it is not surprisingly that over several decades of research, different personality theorists have emphasized different aspects of these dimensions. These differing interpretations were often reflected in the labels attached to each factor. However, in recent years there seems to be a convergence in the literature toward referring to the FFM dimensions as *Extraversion*, *Agreeableness*, *Conscientiousness*, *Emotional Stability*, and *Openness to Experience*. It should be noted that each of these five factors is bipolar and that these labels reflect only the "positive" pole of each dimension. For the sake of brevity, only the "positive" pole of each dimension is described. However, the "negative" pole of each dimension may easily be conceptualized in that it represents the opposite set of personality characteristics. It is important to emphasize that the negative poles of the FFM dimensions do not necessarily indicate pathology. Rather, they represent different constellations of response tendencies which, depending on circumstances, can lead to beneficial or harmful consequences. All of the FFM dimensions, taken to their positive or negative extremes, hold the seeds of dysfunction. The following descriptions of each dimension are drawn from the excellent summary table found in Mount and Barrick (1995, pp. 161-164).

The *Extraversion* dimension is associated with characteristics such as being sociable, gregarious, talkative, assertive, adventurous, active, energetic, and ambitious.

The *Agreeableness* dimension is associated with characteristics such as being courteous, good natured, flexible, trusting, cooperative, forgiving, empathic, caring, soft hearted, and tolerant.

The *Conscientiousness* dimension is associated with characteristics such as being careful, thorough, responsible, organized, efficient, persevering, hard working, and achievement oriented. It has been argued by some researchers that this dimension is better represented by descriptors suggesting dependability, whereas others have argued that it is better represented by descriptors suggesting achievement. Mount and Barrick (1995) concluded that both sets of descriptors were required to fully capture this dimension.

The *Emotional Stability* dimension is associated with characteristics such as being calm, composed, poised, resilient, adaptable, and self-reliant. (It should be noted that this FFM dimension is still frequently referred to as *Neuroticism* in the literature. However, the authors feel that it is inconsistent to discuss the other four FFM dimensions in terms of their positive poles and this one in terms of its negative pole. Moreover, the term *Neuroticism* has many negative connotations, and even professional audiences can easily misinterpret its meaning.)

The *Openness to Experience* dimension is associated with characteristics such as being imaginative, artistically sensitive, intellectual, curious, polished, original, independent, and having broad interests. As with *Conscientiousness*, there is disagreement regarding the best descriptors for this factor (Mount & Barrick, 1995). Some believe that this dimension primarily represents an orientation toward culture, whereas others feel that it is better represented as intellect. As was the case with *Conscientiousness*, a third group argues that both sets of descriptors are required to fully capture this dimension.

In summary, despite minor differences regarding the interpretation of two of its factors, as a whole, the FFM of personality provides a simple and theoretically coherent scheme within which to organize a wide range of personality variables. Consequently, it has been used by a number of researchers conducting meta-analyses relating personality to job performance.

PERSONALITY AND JOB PERFORMANCE

Hough et al. (1990) conducted one of the first meta-analyses of the relationship between personality and job performance that categorized a large number of personality measures into a smaller number of broader personality dimensions. This work was part of "Project A," mentioned earlier in this chapter. This project involved the development of the ABLE inventory (an induction center screening instrument) for the U.S. Army. Hough et al. started

with Hogan's six-factor model of personality (Hogan, 1982). Hogan's model is essentially a variant of the FFM, which divides the *Extraversion* dimension into two components. Hough et al. labeled Hogan's six dimensions *Surgency*, *Adjustment*, *Agreeableness*, *Dependability*, *Intellectance*, and *Affiliation*. In addition to these six dimensions, Hough and her colleagues used three categories of their own conceptualization that they labeled *Achievement*, *Masculinity*, and *Locus of Control*. They referred to these nine constructs as temperament categories.

Hough et al. (1990) then reviewed the personality and job performance literature from the period of 1960 to 1984 and assigned the 146 content scales from 12 commonly used multiscale personality inventories into one of the nine temperament categories. The mean correlation between each of these categories and several criteria related to job performance were then calculated. Hough et al. concluded that the only temperament category that had poor validity was *Affiliation*. They further concluded that the temperament categories of *Surgency*, *Adjustment*, *Agreeableness*, *Dependability*, *Achievement*, and *Locus of Control* were of potential importance in predicting performance in the U.S. Army.

Although the work of Hough et al. (1990) was pioneering, it must be viewed as an intermediate step along the path toward imposing a parsimonious structure on the personality-job performance literature because it used a six-factor variant of the FFM as well as three temperament categories of the authors' own conceptualization. This work is also limited because it was performed within the context of the development of a screening instrument for the U.S. Army. Consequently, the primary goal of this research was test validation, not exploration of personality structure.

The first job performance meta-analysis that used a *true* FFM was conducted by Barrick and Mount (1991). It was to become one of the most frequently cited articles in the 1990's (Mount & Barrick, 1998). Barrick and Mount (1991) attempted to identify all published and unpublished research related to job performance and personality from the years 1952 to 1988. Ultimately, they identified 117 studies that they deemed appropriate for inclusion in their meta-analysis. These 117 studies yielded a total of 162 samples for a total sample size of 23,994. Barrick and Mount categorized the studies into one of five major occupational groupings and three criteria. The five occupational groupings were professionals, police, managers, sales, and skilled and semiskilled workers. The three criteria were job proficiency, training proficiency, and personnel data. Barrick and Mount further classified these criteria as being either objective or subjective ratings. The personality measures used by these studies were assigned by a team of trained raters to one of the dimensions of the FFM or to a sixth "miscellaneous" category.

Barrick and Mount (1991) analyzed the data three different ways. The first analysis examined the mean correlations of the five personality dimensions with each of the five occupational groupings across all three criteria. The

second analysis examined the mean correlations of the personality dimensions with each criterion across occupations. The third analysis examined the mean correlations of the personality dimensions with outcome criteria classified as either objective or subjective across both occupational groupings and criteria. Objective criteria included productivity, salary, turnover and tenure, and status change. The subjective criteria consisted primarily of supervisor ratings.

Barrick and Mount (1991) hypothesized that both *Conscientiousness* and *Emotional Stability* would be predictive of job performance across all criteria for all of the occupational groupings in the study. However, only *Conscientiousness* was found to be significantly related to job performance across all criteria for all of the occupational groupings. The mean correlations for *Conscientiousness* ranged from .20 to .23. The hypothesis regarding *Emotional Stability* found little support. The mean correlation for *Emotional Stability* across all criteria for all of the occupational groupings was only .08. As expected by Barrick and Mount, none of the other FFM dimensions were predictive of performance across all criteria for all of the occupational groupings in the study.

However, Barrick and Mount (1991) did hypothesize that some of the remaining dimensions of the FFM would be predictive of job performance for one or more of the occupational groupings. They hypothesized that both *Extraversion* and *Agreeableness* would be valid predictors of job performance for the occupational groupings of managers and sales because both are areas requiring good interpersonal skills. This hypothesis received mixed support. *Extraversion* was found to be a predictor of performance for both occupational groupings (mean correlations of .18 for managers and .15 for sales), but *Agreeableness* was found to be predictive only for managers (.10). However, this value was only slightly higher than the mean value (.07) for *Agreeableness* across all occupational groups.

In the analysis of mean correlations by criterion type across occupational groupings only *Conscientiousness* was significantly related (.20-.23) to each category of job performance (Barrick & Mount, 1991). As hypothesized by Barrick and Mount, *Openness to Experience* was related (.25) to training proficiency. They also found that *Extraversion* was a significant predictor (.26) of training proficiency.

The analysis of mean correlations by objective versus subjective criteria across both occupational groupings and criteria found, with one exception, that all of the correlations for subjective ratings were higher than those for objective ratings. However, the only sizeable correlation was for subjective ratings of *Conscientiousness* (.26 across all criteria, as opposed to .10 for objective ratings).

The second meta-analysis of job performance that used the FFM was conducted by Tett, Jackson and Rothstein (1991). Tett and his colleagues

used more restrictive inclusion criteria than Barrick and Mount (1991). For example, Barrick and Mount included unpublished studies and Tett et al. excluded unpublished studies. In addition, Tett et al. only included studies published between 1968 and 1991. Ultimately, Tett et al. identified a total of 86 studies, for a total of 97 independent samples with a total sample size of 13,521.

Tett et al. (1991) found a mean correlation of .24 between personality and job performance when comparing across all occupational groups included in their study. This value is similar to the mean correlation of .21 found by Schmitt et al. (1984), but it is much larger than the value of .11 reported by Barrick and Mount (1991).

Tett et al. (1991) also made comparisons between personality and job performance for a number of subgroups within their data set. Among these comparisons was one between confirmatory and exploratory studies. In confirmatory studies, the selection of personality measures and performance criteria was driven by theory or is based on the results of previous research and job analyses. In exploratory studies, researchers typically used multifactor personality inventories and a broad range of convenient performance criteria in a purely empirical fashion—an approach that has sometimes been unkindly characterized as a “multivariate fishing expedition.” Tett et al. found much larger mean correlations between personality and job performance for the confirmatory studies (.29) than those for exploratory studies (.12). Tett et al. also compared the confirmatory studies that used job analysis to guide variable selection with those that did not use job analysis. The mean correlation for the studies that used job analysis was .38 as compared to .29 for studies that did not. Tett et al. concluded from these two results that the size of the relationship between personality and job performance would continue to be underestimated as long as researchers continued to use exploratory models.

Tett et al. (1991) also made several other comparisons that had important implications for the interpretation of personality–job performance meta-analysis results. A larger mean correlation was found between personality and job performance for recruits (.30) than for incumbents (.21). Consequently, research done on incumbents will likely underestimate the importance of personality variables for selection purposes. Perhaps reflecting the convenience of conducting research on incumbents as opposed to on recruits, the number of samples using incumbents (83, total $n = 8,542$) in this meta-analysis greatly outnumbered that using recruits (12, total $n = 4,853$).

Tett et al. (1991) found a larger mean correlation between personality and job performance for military samples (.30) than for civilian samples (.20). There were only nine military samples included in this meta-analysis, as compared to 88 civilian samples. However, the total size for the military samples was 5,054 as compared to 8,467 for the civilian samples. This finding suggests that studies attempting to determine the relationship between personality

and job performance for the general population may overestimate the size of this correlation if large samples of military personnel are included in its calculation.

Tett et al. (1991) found that the relationship between personality and job performance was larger for samples from research published in peer reviewed journals (.27) than for samples from unpublished dissertations (.13). Tett et al. suggest that dissertation research is likely to be of a lower caliber than research published in peer-reviewed journals. They argue that casting one's net too widely for studies to include in a meta-analysis will catch methodologically inferior studies that could lead to an underestimation of the size of the relationship between personality and job performance.

Finally, Tett et al. (1991) compared the relationship of each of the FFM dimensions to job performance across their entire sample. In general, their findings were greater in magnitude than those reported by Barrick and Mount (1991). Tett et al. found a mean correlation of .16 between *Extraversion* and job performance as compared to the value of .13 found by Barrick and Mount; a mean correlation of .22 between *Emotional Stability* and job performance as compared to the value of .08; a mean correlation of .33 between *Agreeableness* and job performance as compared to the value of .07; a mean correlation of .18 between *Conscientiousness* and job performance as compared to the value of .22; a mean correlation of .27 between *Openness to Experience* and job performance as compared to the value of .04.

Overall, the mean correlations for *Extraversion* and *Conscientiousness* found by Tett et al. (1991) and Barrick and Mount (1991) were roughly equivalent. However, those for *Emotional Stability*, *Agreeableness*, and *Openness to Experience* differed considerably. Barrick and Mount found only *Conscientiousness* to be a significant predictor of job performance. Tett et al. found that, with the possible exception of *Extraversion*, all of the FFM dimensions were predictive of job performance. Goldberg (1993, p. 31) termed the inconsistencies between two such similar studies "befuddling" and seconded Tett et al.'s call for greater precision in future personality-job performance research.

Ones, Mount, Barrick, and Hunter (1994) attempted to reconcile the differences between the two studies by challenging Tett et al. (1991) on the basis of methodological and technical errors in their meta-analysis. Ones et al. argued that these errors inflated the estimates of the size of the relationship between personality and job performance. In a response to this criticism, Tett, Jackson, and Reddon (1994) pointed out that the primary purpose of Barrick and Mount (1991) was to better understand predictor-criterion relationships across a range of occupations, whereas the purpose of Tett et al. (1991) was to investigate the magnitude of personality predictors selected on the basis of either theory or job analysis. Tett et al. (1994) did concede many of the technical points made by Ones et al. and reanalyzed their data

set incorporating the recommended changes. This reanalysis resulted in a lowering of the mean correlation between personality and job performance from .24 to .17, and also found no differences between confirmatory studies using job analysis and those studies not using job analysis. Tett et al. (1994) argued that although this reanalysis did decrease the magnitude of the estimated relationships between personality and job performance, with the sole exception of the job analysis findings, the original study's main conclusions remained unchanged.

As mentioned earlier, it has been argued by some researchers that the FFM dimension *Conscientiousness* is better represented by descriptors suggesting dependability, whereas others have argued that it is better represented by descriptors suggesting achievement. Mount and Barrick (1995) conducted a meta-analysis in which they investigated whether better prediction of job performance occurred on the level the FFM dimension *Conscientiousness* or on the level of its hypothesized components of *Dependability* and *Achievement*. This study also investigated whether better predictions are made using global or more specific job performance criteria. Mount and Barrick included 173 studies with a total 206 of samples for a total of 37,780 subjects in this meta-analysis.

Mount and Barrick (1995) drew three major conclusions from the results of this study. First, they concluded that both *Conscientiousness* and its components of *Dependability* and *Achievement* predict specific measures of job performance (mean correlations of .40, .38, and .38, respectively) better than they predict global job performance (mean correlations of .31, .30, and .33, respectively). Second, some specific measures of job performance are better than others at being predicted by *Conscientiousness* and its components of *Dependability* and *Achievement*. Those job performance criteria that Mount and Barrick categorized as being ability or "can do" factors were more poorly predicted (mean correlations ranged from .25 to .26) than those categorized as motivational or "will do" factors (mean correlations ranged from .42 to .45). Finally, *Dependability* and *Achievement* predict specific performance measures better than *Conscientiousness* does, only when they are conceptually related to the criterion. For example, employee reliability was better predicted by *Dependability* (mean correlation of .47) than by either *Achievement* (.33) or *Conscientiousness* (.41). However, Mount and Barrick caution that these incremental gains tended to be relatively small and therefore may not be of much practical significance.

Salgado (1997) noted that previous meta-analyses relating job performance and personality had been carried out using research samples of U.S. and Canadian workers. He suggested that the United States and Canada were so similar culturally that it was possible that a meta-analysis of data from other countries might reveal cultural differences in the relationship between personality and job performance. Salgado identified 36 studies, both published and

unpublished, from European community sources for inclusion in a meta-analysis. Depending upon the FFM dimension being analyzed, these studies yielded 18 to 32 samples with total sample sizes ranging from 2,722 to 3,877. Salgado assigned the samples from these studies to one of five occupational groupings: professionals, police, managers, sales, and skilled labor. It should be noted that due to limitations in the data set, not all occupational groupings could be included in all comparisons. Performance criteria included supervisory ratings, training proficiency, and personnel records information.

Salgado (1997) found that both *Emotional Stability* (mean correlation of .19) and *Conscientiousness* (.25) were significant predictors of job performance when comparing across all criteria and all occupational groupings. When analyzing each criterion across all occupational groupings Salgado found that *Emotional Stability* (supervisory ratings .18, training proficiency .12, and personal records .27) and *Conscientiousness* (supervisory ratings .26, training proficiency .39, and personal records .11) were good predictors for all three. *Openness to Experience* (.26) and *Agreeableness* (.31) were found to be good predictors of training proficiency. When analyzing by occupational grouping across all criteria, *Conscientiousness* was found to be a good predictor for four of four occupational groupings (police .39, managers .16, sales .18, and skilled labor .23). *Emotional Stability* was a good predictor for four of five occupational groupings (professionals .43, police .22, managers .12, and skilled labor .25). *Extraversion* was a good predictor for two of four groupings (police .20 and managers .05). *Openness to Experience* was a good predictor for two of the three groupings (police .18 and skilled labor .17). *Agreeableness* was a good predictor for three of five groups (professionals .14, police .14 and skilled labor .05).

Hurtz and Donovan (2000) conducted the first meta-analysis of the relationship between personality and job performance with data from studies that had used personality measures specifically designed to measure the dimensions of the FFM. Previous meta-analyses had used a post hoc assignment of non-FFM personality measures to FFM personality dimensions. As noted by Salgado (1997), different groups of researchers sometimes assigned the same personality scale to different FFM dimensions. Hurtz and Donovan suggest that the modest level of rater agreement reported for assignment of personality scales to FFM dimensions (as reported by Barrick & Mount, 1991, and Tett et al., 1991) reflects the difficulty of the task and lends support to the argument that significant numbers of personality measures may have been misclassified in these and similar studies.

Hurtz and Donovan (2000) were able to identify a total of 26 studies for their meta-analysis. Depending on the FFM dimension being analyzed, these studies yielded 35-45 samples with total sample sizes ranging from 5,525 to 8,083. Subjects from these samples were assigned to one of four occupational groupings (sales, customer service, managers, skilled, and semiskilled). The

outcome measures were assigned to the categories of job proficiency, training proficiency, task performance, job dedication, and interpersonal facilitation. The data were analyzed in three ways: (a) across criteria and occupational groupings, (b) by occupational grouping across criteria, and (c) by criterion across occupational groupings.

The analysis across criteria and occupational groups indicated that only two of the dimensions of the FFM were significant predictors of job performance (Hurtz & Donovan, 2000). As had been found by previous meta-analyses, *Conscientiousness*, with a mean correlation of .20, was the best predictor of performance. *Emotional Stability* was also a significant predictor, but with a substantially lower mean correlation (.13).

The analysis by occupational grouping across criteria found that none of the FFM dimensions were predictive of job performance for the skilled and semiskilled occupational grouping (Hurtz & Donovan, 2000). *Conscientiousness* was predictive of performance for sales (.26) and customer service (.25). *Emotional Stability* was predictive of performance for sales (.13), customer service (.12), and managers (.12). *Agreeableness* was predictive of performance for customer service (.15). *Extraversion* was predictive of performance for sales (.15) and managers (.12). *Openness to Experience* was predictive of job performance for customer service (.15).

The analysis by criterion across occupational groupings found that *Conscientiousness* was predictive of job proficiency (.22) and interpersonal facilitation (.16, Hurtz & Donovan, 2000). *Emotional Stability* was predictive of job proficiency (.14), training proficiency (.08), task performance (.13), job dedication (.13), and interpersonal facilitation (.16). *Agreeableness* was predictive of training proficiency (.18) and interpersonal facilitation (.17). *Extraversion* was predictive of training proficiency (.17) and task performance (.06). *Openness to Experience* was predictive of training proficiency (.13).

Summary

After several decades of being discounted, the relationship of personality and job performance is being embraced with renewed interest. Much of this enthusiasm is attributable to two advances: one methodological and the other theoretical (Hurtz & Donovan, 2000). The technique of meta-analysis provides researchers with an objective method to equate and summarize results across multiple studies. The Five-Factor Model (FFM) of personality provides researchers with an empirically supported and parsimonious framework within which to organize a wide range of personality constructs. An additional important reason for the renewed interest in the relationship between personality and job performance is that for selection purposes, personality assessment can add a relatively race- and gender-neutral increment to the predictive validity of cognitive assessment (Hogan & Roberts, 2001).

The most robust finding from the FFM meta-analyses is that *Conscientiousness* is predictive of a wide range of job performance criteria across a wide range of occupational groups. A number of meta-analyses have also found that *Emotional Stability* is broadly predictive of job performance. The remaining FFM dimensions appear to be predictive of fewer performance criteria for a narrower range of occupational groups.

To a certain extent, one wonders at the excitement. After all, these meta-analyses all found personality-job performance relationships around .20, a value very similar to that dismissed by earlier researchers. Moreover, it certainly comes as no surprise that a personality dimension characterized by dependability and an orientation toward achievement and another characterized by being calm, resilient, and self-reliant should both be positively correlated with job performance. In addition, the very modest validity coefficients for *Conscientiousness* only account for 4% to 5% of outcome variance. The validity coefficients for *Emotional Stability* account for even less. Although recognizing its theoretical importance, Hurtz and Donovan (2000) questioned the practical significance of predicting 5% of the outcome variance in job performance. Indeed, Mount and Barrick (1995) questioned the usefulness of predictors with validities lower than .30, given the existence of other predictors with higher validities.

All other things being equal, a predictor with a validity coefficient of .20 is certainly not one's first choice for selection purposes given the existence of other predictors with higher validities. However, all things are not equal. Cognitive testing continues to be the single best predictor of job performance, but has been demonstrated to have an adverse impact on the selection of minority group applicants (Sackett, Schmitt, Ellingson, & Kabin, 2003). Consequently, other measures, such as personality inventories, that account for additional, unique variance and that are relatively race and gender neutral can be used to incrementally add to the predictive validity of the selection process. The selection prediction tables prepared by Taylor and Russell (1939) provide an excellent illustration of how even a single predictor of low predictive validity, when used in conjunction with another predictor, can significantly improve the predictive validity of the selection process.

Another perspective on the use of personality measures for selection purposes may be offered by recalling that many of the scales used in psychology are constructed of items that individually correlate .2 to .3 with total scale score, but when aggregated may easily correlate .5 or higher with a criterion. By aggregating a number of low to moderate validity predictors, the predictive whole could indeed be greater than the sum of its parts. Conceptually, this is related to the use of composites of noncognitive predictors for selection discussed by Sackett et al. (2003).

As discussed earlier, the predictive validities of *Conscientiousness* and *Emotional Stability* have been established across a series of meta-analyses,

but their validity coefficients are so modest that their practical use has been questioned (Hurtz & Donovan, 2000; Mount & Barrick, 1995). It has been suggested that the dimensions of the FFM are so broad that the predictive power of these factors is blunted by their lack of a more precise focus (Tett et al., 1991). Mount and Barrick (1995) concluded that although the FFM model was able to predict overall job proficiency well, specific criteria were better predicted by more specific predictors. Therefore, future researchers would do well to ask more focused questions using more specific measures of personality.

It is in this same spirit that Tett et al. (1991) argued that it was time to move beyond purely empirical investigations of the personality—job performance relationship and to conduct more studies guided by theory and job analyses. This view was seconded by Goldberg (1993). Tokar, Fischer, and Subich (1998) also cautioned that future investigators may do well to limit themselves to instruments specifically designed to assess the dimensions of the FFM and its facets rather than to use measures that must be assigned to the FFM post hoc.

PERSONALITY AND JOB SATISFACTION

Research into the trait nature of job satisfaction has enjoyed a long, if somewhat erratic history. Seven decades ago, Fisher and Hanna (1931) noted that a considerable amount of employees' job dissatisfaction could be associated with their degree of emotional maladjustment. A few years later Hoppock (1935) reported a substantial correlation between the emotional adjustment of employees and job satisfaction. Curiously, after this hopeful start there was little further activity in this area for almost half a century (Judge, Heller, & Mount, 2002). However, in the last 20 years, a growing body of literature has accumulated giving support to the notion that job satisfaction is, in part, trait based. Unfortunately, as noted by Spector (1997), although a number of traits have been shown to correlate significantly with job satisfaction, there was little integration in the literature. Similar to the case of job performance, a major reason for this failure was the lack of a simple and theoretically coherent model of personality. As with the job performance literature, the FFM was to provide a remedy for this want. However, unlike the relationship between personality and job performance, which has been the subject of several major meta-analyses in the last 2 decades, it is only recently that the relationship between personality and job satisfaction has become the focus of a meta-analysis.

Guided by the earlier work of Barrick and Mount (1991) linking the FFM and job performance, Judge et al. (2002) conducted a meta-analysis of the relationship between personality and job satisfaction. A total of 163 independent

samples and 334 correlations were included in the analysis. Judge et al. reasoned that four (*Extraversion, Agreeableness, Conscientiousness, and Emotional Stability*) of the five personality dimensions of the FFM would be related to job satisfaction. The remaining dimension, *Openness to Experience*, was not expected to be significantly correlated with job satisfaction. Judge et al. also investigated several potential moderators of the relationship between personality and job satisfaction. The moderators considered in this study were research design (cross-sectional vs. longitudinal), whether or not the personality measures used in a study were specifically designed to measure FFM dimensions, and the job satisfaction measure used by the study.

The results of this meta-analysis showed the expected pattern of relationships between the FFM dimensions and job satisfaction (Judge et al., 2002). The largest mean correlation was found between *Emotional Stability* and job satisfaction (.29), followed closely by *Extraversion* (.25) and *Conscientiousness* (.26). The correlation between job satisfaction and *Agreeableness* was somewhat smaller (.17), but still significant. Finally, as expected, *Openness to Experience* was not significantly correlated with job satisfaction (.02).

Judge et al. (2002) further investigated the relationship between the FFM dimensions and job satisfaction by using regression analysis. This analysis is of particular importance to the discussion of the trait-based nature of job satisfaction as the regression model implicitly assumes that the casual direction of the personality-job satisfaction relationship is from personality to job satisfaction. This analysis found that *Extraversion, Conscientiousness, and Emotional Stability* were significant predictors of job satisfaction. A multiple correlation of .41 was found between the FFM dimensions and job satisfaction.

None of the moderator variables investigated by Judge et al. (2002) were found to significantly influence the relationship between personality and job satisfaction. There was little difference between cross-sectional and longitudinal studies. There was a slight tendency for job satisfaction to be more strongly correlated with personality in studies that used measures that were not specifically designed to assess the FFM dimensions. However, this difference was only found to be significant in the case of *Conscientiousness*. Finally, although there was some variability in the size of the correlations between personality and job satisfaction depending on the measure of job satisfaction used, the most noteworthy finding was that the previously unvalidated measures of job satisfaction appeared to be as predictive as the previously validated measures.

In summary, the findings of this meta-analysis indicate that the FFM dimensions of *Extraversion, Conscientiousness, and Emotional Stability* were significant, if moderate, predictors of job satisfaction. *Agreeableness* is relatively weakly correlated with job satisfaction and *Openness of Experience* appears to be uncorrelated with job satisfaction.

PERSONALITY AND WELL-BEING

According to Diener (2000), job satisfaction is a component of the broader construct of subjective well-being (SWB). Diener argues that SWB includes the components of global life satisfaction, satisfaction with important life domains (such as work), and experiencing high levels of positive affect and low levels of negative affect. The field of SWB focuses on how people assess their lives both at the moment and over longer periods (Diener, Oishi, & Lucas, 2003). The assessments of more immediate SWB include emotional reactions to events and recent mood states. The assessment of longer term SWB includes perceptions of life satisfaction, fulfillment, and satisfaction with important life domains such as work and family life.

Starting in the 1970s, researchers began to move from investigating the demographic correlates of SWB to focusing on personality as the primary determinant of SWB (DeNeve, 1999; Diener, 2000). The most commonly cited personality traits for the prediction of SWB are *Extraversion* and *Emotional Stability*. However, in their meta-analysis of the relationship between personality and SWB, DeNeve and Cooper (1998) showed that focusing exclusively on *Extraversion* and *Emotional Stability* may serve to oversimplify the complex pattern of associations between personality and SWB. In their literature review for this meta-analysis, DeNeve and Cooper identified studies containing 137 personality traits and 1,538 correlations between personality measures and SWB. These studies had 197 independent samples and a total sample size of 42,171 adult subjects. The 137 personality traits were each assigned to one of the personality dimensions of the FFM. This meta-analysis found that all of the FFM personality dimensions were positively correlated with SWB. In addition, a number of more specific personality traits had moderate correlations with SWB. These traits included defensive repressiveness (a tendency to avoid threatening information), trust, desire for control, heartiness, positive affectivity, and locus of control.

DeNeve and Cooper (1998) and DeNeve (1999) argue strongly that SWB should not be conceptualized only in terms of *Extraversion* and *Emotional Stability* for several reasons. First, positive emotionality is strongly related to SWB. Second, personality traits that facilitate the development of relationships are also important to SWB. For example, affiliation, trust, and sociability are all relationship-enhancing traits that facilitate SWB. Finally, individuals reporting higher levels of SWB tend to explain their life events in optimistic and adaptive ways. Stated differently, these individuals are resilient.

Given the linkage between job and life satisfaction, Judge et al. (2002) compared the findings from their meta-analysis of personality and job satisfaction with those from DeNeve and Cooper's (1998) meta-analysis of personality and SWB. DeNeve and Cooper found a mean correlation of .30 between life satisfaction and *Emotional Stability* as compared to the mean correlation of

.29 between job satisfaction and *Emotional Stability* found by Judge et al.; a mean correlation of .22 between life satisfaction and *Extraversion* as opposed to .25; a mean correlation of .18 between life satisfaction and *Openness to Experience* as opposed to .02; a mean correlation of .21 between life satisfaction and *Agreeableness* as opposed to .17; and a mean correlation of .28 between life satisfaction and *Conscientiousness* as opposed to .26. With the exception of *Openness to Experience*, these relationships are very similar. These results led Judge et al. (2002) to conclude that the factors leading to the relationship between personality and life satisfaction were likely very similar to those leading to the relationship between personality and job satisfaction.

In summary, personality traits do seem to account for a significant amount of variability in SWB. However, Christopher (1999) notes that it is important to recognize that definitions of well-being are culturally rooted. Therefore, any assessment of well-being cannot be free of these cultural values. Diener et al. (2003) suggest that culture moderates which variables most influence SWB. They argue that in addition to personality, life circumstances, culture, and the approach versus avoidance tendencies of societies, all influence long-term levels of SWB.

Person-Environment Psychology and Subjective Well-Being

Several theoretical traditions have made important contributions to our understanding of SWB in a vocational context. The theories all fall within the domain of person-environment psychology, an area that has its roots in Lewin's (1935) work suggesting that a person's behavior is a function of the person and the environment. Lewin's idea that the environment is as important as the individual, and that both must be analyzed to assess and understand behavior, continues to be a theoretical base for person-environment psychology today. In the decades since Lewin's initial articulation, person-environment theories have grown greatly in terms of sophistication and now speak in terms of personality types, environmental adaptation, and goal striving.

Most prominent among these theories is Holland's (1997) Theory of Career Types. Holland's theory postulates that work settings, jobs, academic environments, and an individual's personality may all be described in terms of six primary personality types (Walsh & Holland, 1992). Holland considers the choice of an occupation to be an expression of personality. Consequently, he argues that interest inventories should be considered personality inventories. Behavioral outcomes are a function of the interaction between the individual's personality (which includes abilities) and the environment.

According to Holland (1997), the workers in a particular work environment tend to have similar personalities, histories of personal development and coping strategies. Therefore, environments may be defined in terms of

the personalities of the incumbent workers in a given workplace. It is central to the theory that the most important interactions between the worker and the work environment are social and psychological in nature. Holland argues that a complimentary or congruent match between person and environment is reinforcing and will contribute to job stability, work quality, and SWB. A substantial amount of research, summarized in Holland (1997), Walsh and Holland (1992), and Spokane, Meir, and Catalano (2000), indicates that individuals tend to choose college majors and occupations that are consistent with their personality types. The evidence further suggests that congruence between the person and the work environment is related to job satisfaction, job stability, job involvement, work quality, productivity, and SWB.

In their meta-analysis of the relationship of personality and job satisfaction, Judge et al. (2002) also conducted an analysis exploring this relationship within the context of Holland's model. They reasoned that *Conscientiousness* would be most related to job satisfaction for individuals in both *Conventional* and *Realistic* occupations. They also expected that *Openness to Experience* would be most related to job satisfaction for *Investigative* occupations and that both *Agreeableness* and *Extraversion* would be related to job satisfaction for *Social* occupations. The analysis found that *Conscientiousness* was strongly related to job satisfaction for individuals in both *Conventional* and *Realistic* occupations. However, the other expected results were not supported by the analysis. Judge et al. suggest that one possible explanation for these findings is that the primary RIASEC codes, at the study level, are too gross to fully capture vocational type.

In another recent meta-analysis, Morris and Campion (2003) investigated the relationship between congruence (as defined in terms of Holland types) and job satisfaction and performance. This was the first such meta-analysis that corrected for unreliability in both the methods used to assign Holland types to the person (interest inventories) and in the outcome measures. Morris and Campion found a mean correlation between congruence and job performance of .29 and a mean correlation between congruence and job satisfaction of .24. Taken together with previous research, these results strongly suggest that persons in environments that are congruent with their personalities tend to be psychologically healthier, more satisfied, and more productive than are people in incongruent environments.

The Theory of Work Adjustment (TWA) views work as an interactive and reciprocal process between the individual and the work environment (Dawis & Lofquist, 1984). The individual fulfills the labor requirements of the work environment, in exchange for which the work environment fulfills a range of financial, social, and psychological needs for the individual.

Dawis and Lofquist (1984) articulated the TWA through a detailed series of propositions and corollaries that make specific predictions regarding the variables important to work adjustment and the processes by which work

adjustment is attained. For example, when the worker's abilities match the skill requirement of the workplace, the worker is deemed satisfactory by her or his employer. When the worker's reinforcement needs are well met by the workplace, the worker experiences job satisfaction. Both the worker and the employer must be satisfied for tenure to occur.

Dawis and Lofquist (1984) point toward the substantial body of work related to the development of the *Occupational Aptitude Profiles* (U.S. Department of Labor, 1970) to support their propositions related to congruence between worker abilities and job skill requirements. Consequently, the overwhelming majority of the research inspired by the TWA has investigated congruence between the needs of the worker and the reinforcers offered by the workplace. Twenty work-related reinforcer dimensions are used to operationalize the match between the work-related needs of the individual and the reinforcer offerings of the work environment (Dawis & Lofquist, 1984). Recently, these TWA need-reinforcer dimensions were incorporated into the Occupational Information Network (O*NET; U.S. Department of Labor, 1998), the electronic database that is the successor to the Dictionary of Occupational Titles (U.S. Department of Labor, 1991).

In their review of the large body of TWA literature investigating the relationship between need-reinforcer correspondence and job satisfaction, Lofquist and Dawis (1984) reported correlations that ranged from a low of .14 to a high of .55, with most values falling in the .3 to .45 range. In related work that compared several indices of fit and a variety of methods for describing workplace reinforcers, Rounds (1981) reported a median correlation of .33 between congruence and job satisfaction. More recently, Tinsley (2000) concluded that the TWA research offered the strongest evidence in the empirical literature of the relationship between congruence and job satisfaction.

Dawis and Lofquist (1984) suggested that the basic concepts of the TWA could be extended outside of the workplace and applied to personal counseling issues. Fulfilling this promise, Lofquist and Dawis (1991) proposed Person-Environment-Correspondence (PEC) theory. PEC theory conceptualizes most personal problems as arising from discorrespondence between an individual and his or her environment. Similar to the TWA, PEC theory is clearly articulated in a series of propositions and corollaries that directly point toward hypothesis testing opportunities for researchers and practical applications for practitioners. Although PEC theory has yet to generate the research base of the TWA, it provides a rich and dynamic framework within which to conceptualize the processes by which individuals attempt to achieve and maintain optimal correspondence with their environments.

Moos's social climate model provides a conceptual framework for assessing the fit of persons and environments across a wide range of settings (Moos, 1976, 1987). Similar to Holland's (1997) theory of career types, the social climate model assumes that environments, like people, have distinct

"personalities" and that the greater the congruence is between the personalities of persons and of environments, the more satisfactory the possible outcomes.

Moos (1987) found that relationship variables are central to the description of the social climate across a wide range of life domains. Moos (1984, 1987) have also found that how individuals perceive their social environments has important effects on personal growth and SWB. A significant research finding across a number of studies is that satisfying relationships facilitate personal growth and SWB. Stated differently, people tend to be more satisfied and productive in environments that are perceived to be relationship oriented.

A growing body of work by other researchers is lending support to Moos's findings. As was discussed earlier, DeNeve and Cooper (1998) found that personality traits, such as affiliation, trust, and sociability, which facilitate or enhance relationships, are important to SWB. Ryan and Deci (2000) noted the importance of warm, trusting, and supportive interpersonal relationships to SWB. Myers (1999) and Reis, Sheldon, Gable, Roscoe, and Ryan (2000) found that that positive relationships with others tends to be highly associated with SWB. Finally, Ryff and Singer (1998, 2000) investigated SWB within the context of a life-span theory of human flourishing. They consider positive relations with others to be a key dimension of SWB.

The work of Pervin (1992) focuses on understanding SWB from a transactional viewpoint. The research on Pervin's model suggests that when individuals interact with environments that they perceive to be relatively consistent with their self-concepts, they are happier and more satisfied. Pervin has concluded that self-environment similarity does contribute to SWB, but cautions that the transactions are complex. Pervin has found that people in environments that they perceive to be friendly, calm, interesting, and free tend to report higher levels of SWB and productivity. This finding is consistent with the research findings discussed earlier suggesting that positive relations with others is a key element in SWB (Moos, 1984, 1987; Ryff & Singer, 1998, 2000).

Barker's (1965, 1968, 1978) behavior-setting theory emphasizes the powerful impact environment has on behavior. Barker attempted to identify natural units of behavior-environment interaction. He called these units *behavior settings*. A behavior setting is a bounded, self-regulating, and ordered system in which replaceable human components interact to carry out an ordered sequence of events referred to as the *setting program* (Wicker, 1984). Barker argued that some behavior settings lend themselves much more to certain kinds of behaviors than do others. For example, a schoolroom lends itself far more to an algebra class than does a convenience store. Moreover, the behavior settings themselves tend to evoke different patterns of behavior. For example, a worship service evokes patterns of behavior very different from those at a basketball game.

In a sense, behavior settings may be thought of as shaping the behavior of those who inhabit them (Barker, 1965, 1968; Wicker, 1979, 1992). Behavior settings operate according to a set of structural rules that link actions with environments and situations. These sets of rules are referred to as *standing patterns of behavior*. Barker argues that people tend to be influenced by the behavioral rules of the settings that they are in, particularly if they find the setting reinforcing in some way.

To date, much of the research inspired by the behavior-setting theory has focused on an aspect of the theory referred to as *staffing*. Staffing refers to the number of people needed to maintain the activities of a behavioral setting (Barker, 1968). Behavior-setting theory holds that there are an optimal number of individuals needed to maintain the activities of a behavior setting. Containing too few (understaffing), as well as too many (overstaffing), individuals will effect how the setting responds to stressors (Wicker, 1984). Compared to individuals in overstaffed settings, persons in understaffed settings tend to be involved in a greater number of activities within the setting. Moreover, these activities tend to be at a higher level of responsibility, are more challenging to perform, and are more critical to the survival of the setting. Persons in understaffed settings report feeling more versatile, being more important to the functioning of the setting, having better quality and more frequent interactions with colleagues, experiencing higher morale and higher levels of satisfaction, and having greater productivity than persons in overstaffed settings.

In summary, research inspired by the behavior-setting theory has produced somewhat counterintuitive results. Although individuals in understaffed settings are busier and more challenged by their activities, they also report experiencing higher levels of variables associated with SWB than do individuals in overstaffed settings. Perhaps the explanation for this seeming contradiction lays in the research discussed earlier in this chapter that reported higher levels of SWB were found in environments that fostered interpersonal relations. In understaffed situations, to ensure the ongoing functioning of the setting, individuals have to interact with one another more frequently and rely on one another to a much greater degree than do individuals in overstaffed situations. Perhaps this forced reliance on one another yields results similar to those brought about by more positive environments using more relaxed team-building approaches.

Goals and Subjective Well-Being

Recent research from the SWB literature has focused on individual motivation and the pursuit of personally relevant goals. In this literature, the person is viewed as being primarily oriented toward individual, purposeful, and rational action. The setting is primarily regarded as the task environment within which goals or aspirations are pursued.

A large and growing body of research literature documents the relationships among goals, goal progress, and SWB. For example, evidence indicates that feeling confident with respect to valued goals is associated with enhanced job satisfaction and SWB (Carver & Scheier, 1999; McGregor & Little, 1998; Ryan & Deci, 2001). The evidence also indicates that goal progress is associated with enhanced SWB, particularly for goals that are evaluated as being important (Brunstein, 1993; Cantor & Sanderson, 1999; Ryan & Deci, 2001). However, the relationship between goals and SWB is more complex than simply assuming that purposeful behavior contributes to SWB (Robbins & Kliewer, 2000). The level of challenge presented by one's goals, the approach or avoidance motivational systems of goal activities, the environmental context, and the relative autonomy of personal goals all moderate the relationship between goal attainment and SWB. For example, when goals are either too easy or too difficult, positive affect is lowered (Csikszentmihalyi & Csikszentmihalyi, 1988; Ryan & Deci, 2001). Furthermore, expectations of failure have been associated with higher levels of negative affect (Emmons, 1986). In regard to motivational systems, Elliott and Sheldon (1997) found that pursuit of avoidance goals tended to be associated with poorer goal progress and lower SWB. Carver and Scheier (1999) presented evidence connecting approach goals to positive SWB outcomes and avoidance goals to negative SWB outcomes. Brunstein, Schultheiss, and Grassman (1998) have shown that progress toward need-congruent goals is positively related to SWB, whereas commitment to incongruent goals is negatively associated with SWB.

Diener (2000) noted that the environmental context within which one pursues goal attainment moderates the process by which goals influence SWB. Diener and Fujita (1995) found that individuals having higher levels of resources (e.g., money, physical attractiveness, or social skills) in areas related to their goals tend to attain higher levels of SWB than do individuals with fewer resources. Other evidence suggests that goals that are related to community participation and affiliation tend to be more positively related to SWB than are financial goals (Kasser & Ryan, 1993, 1996). In addition, other research suggests that there are multiple paths to SWB and that culture influences the sorts of goals and behaviors that are valued, the resources available to reach goals, and the context in which SWB is understood (Diener et al., 2003; Robbins & Kliewer, 2000).

Another important issue concerns the relative autonomy of personal goals (Ryan & Deci, 2001). Research indicates that the pursuit of self-endorsed goals and that of self-congruent goals tend to enhance SWB (Ryan & Deci; Sheldon & Elliott, 1999; Sheldon & Kasser, 1998). Individuals who attain more self-endorsed and self-congruent goals tend to report more need-satisfying experiences, higher levels of SWB, and personal growth. Goals that were poorly integrated with self, even when achieved, were associated with lower levels of SWB.

A volume edited by Sheldon and Schmuck (2001) contains some important findings related to goal perceptions and goal content. The authors in this volume conclude that goals that are perceived as having a long-term basis tend to be more positively associated with SWB than are short-term goals, which are primarily concerned with the particular moment in time in which they are generated (Lapierre, Bouffard, Dube, LaBelle, & Bastin, 2001; Zaleski, Cycon, & Kure, 2001). However, given that life demands that we have both long-term and short-term goals, SWB is best served when our short-term goals are related to our long-term goals (Sheldon & Kasser, 1995). With regard to goal content, research suggests that superficial, self-enhancing goals (extrinsic goals such as money, fame, or beauty) are often associated with frustration and worry, and are associated with lower levels of SWB (Cohen & Cohen, 2001; Kasser & Ryan, 2001; Salmela-Aro, Pennanen, & Nurmi, 2001; Schmuck, 2001). In contrast, group-enhancing goals (intrinsic goals such as contributing to one's community or social life tasks) are associated with higher levels of SWB. For example, older individuals who pursued altruistic goals were also found to experience enhanced levels of SWB (Lapierre et al.).

In summary, the evidence suggests that individuals who pursue personal goals and projects that are self-selected and self-congruent tend to experience enhanced levels of SWB. The research also suggests that SWB is enhanced when we pursue goals that have a long-term orientation rather than goals that satisfy short-term needs. Finally, intrinsic goals that are group enhancing and focus on the contributions we can make to others tend to be more positively related to SWB than do more self-serving, extrinsic goals.

IMPLICATIONS

Recently, there has been renewed interest in the role that personality plays in job-related performance, satisfaction, and well-being. Much of this renewed interest is attributable to two advances: one methodological and the other theoretical (Hurtz & Donovan, 2000). The technique of meta-analysis provides researchers with an objective method to equate and summarize results across multiple studies. Over the last several decades, meta-analysis has evolved from a simple summing of effect sizes across studies into a complex statistical procedure requiring many well-informed decisions regarding corrections for error and bias in data sets.

A second reason for the renewed interest in personality measures was the emergence of the FFM of personality (Hogan & Roberts, 2001). The FFM provided a much-needed, empirically validated schema for classifying personality measures and imposing order on the confusing mass of personality and job performance and job satisfaction literature. The resulting order laid the foundation for new investigations of the relationship between personality and job

performance and job satisfaction. An additional important reason for the renewed interest in the relationship between personality and job performance is that for selection purposes, personality assessment can add a relatively race- and gender-neutral increment to the predictive validity of cognitive assessment (Hogan & Roberts).

It is in this context that we have explored the topic of vocational psychology and personality by first reviewing the meta-analytic studies focusing on personality and job performance; second, discussing meta-analytic studies focusing on personality and job satisfaction; and third, concluding with a review of relevant research focusing on personality and well-being.

In our review of the meta-analytic studies focusing on personality and job performance, the most robust finding is that *Conscientiousness* is predictive of a wide range of job performance criteria across a wide range of occupational groups. A number of meta-analyses have also found that *Emotional Stability* is broadly predictive of job performance. The remaining FFM dimensions appear to be predictive of fewer performance criteria for a narrower range of occupational groups. What this means is that a personality dimension characterized by dependability and an orientation toward achievement and another characterized by being calm, resilient, and self-reliant tend to be positively correlated with job performance. However, as we have noted, the validity coefficients for *Conscientiousness* and *Emotional Stability* only account for a small amount of outcome variance. Although recognizing its theoretical importance, Hertz and Donovan (2000) question the practical significance of predicting 5% of the outcome variance in job performance. It is in this context that Tett et al. (1999) have suggested that the dimensions of the FFM are so broad that the predictive validity of these factors is blunted by their lack of a more precise focus. Thus, as noted by Mount and Barrick (1995), future researchers would do well to ask more focused questions using more specific measures of personality.

Unlike the relationship between personality and job performance, which has been the subject of several major meta-analyses in the last 2 decades, the relationship between personality and job satisfaction has only recently become the focus of a meta-analysis. Guided by the work of Barrick and Mount (1991) linking the FFM and job performance, Judge et al. (2002) conducted a meta-analysis of the relationship between personality and job satisfaction. A total of 163 independent samples and 334 correlations were included in the analysis. In the results, *Emotional Stability* emerged as the strongest and most consistent correlate of job satisfaction. *Conscientiousness* displayed the second strongest correlation with job satisfaction and extraversion was also found to be a significant predictor. Drawing on the tripartite categorization of attitudes (Eagly & Chaiken, 1993), Judge et al. suggest that the FFM dimensions may influence job satisfaction through the cognitive, affective, and behavioral domains. For example, cognitively these dimensions may influence

how individuals interpret characteristics of their jobs. Affectively, these traits may influence job satisfaction through their effect on mood (Costa & McCae, 1980). Behaviorally, workers who are emotionally stable, extraverted, and conscientious may be happier at work because they are experiencing satisfying results at work (Judge et al., 2002). In a similar vein, DeNeve and Cooper (1998) suggested that *Emotional Stability*, *Conscientiousness*, and *Extraversion* may be key aspects of the "happy personality."

We next discussed significant research focusing on personality and well-being. Noting the linkage between job satisfaction and life satisfaction, Judge et al. (2002) compared the findings of their meta-analysis of personality and job satisfaction with those from DeNeve and Cooper's (1998) meta-analysis of personality and well-being. They concluded that factors leading to the relationship between personality and life satisfaction were likely very similar to those factors leading to the relationship between personality and job satisfaction.

In reviewing the relevant literature focusing on personality and well-being, we found that personality traits do seem to account for a significant amount of variability in subjective well-being. However, as noted by Christopher (1999), it is important to recognize that definitions of well-being are culturally rooted and any assessment of well-being cannot be free of these cultural values. Diener et al. (2003) suggest that culture moderates which variables most influence SWB. They argue that in addition to personality, life circumstance, culture, and the approach versus avoidance tendencies of societies all influence long-term levels of SWB.

It is important to point out that several theoretical traditions have made important contributions to our understanding of SWB in the vocational context. These theories fall within the domain of person-environment psychology, an area that has its roots in Lewin's (1935) work suggesting that a person's behavior is a function of the person and the environment. The theories discussed included John Holland's (1997) Theory of Career Types, Dawis and Lofquist's (1984) Theory of Work Adjustment, Moos' (1976) Social Climate Theory, Pervin's (1992) Transactional Model, and Barker's (1968) Behavior Setting Theory. Taken together, these theories and their related research, in one way or another, all suggest that persons in environments that are congruent with their personalities tend to be psychologically healthier, more satisfied, and more productive than do persons in incongruent environments.

Finally, we reviewed recent research from the SWB literature focusing on individual motivation and the pursuit of relevant goals. In this literature, the person is viewed as being primarily oriented toward individual, purposeful, and rational action. The setting is primarily regarded as the task environment within which goals or aspirations are pursued. In general, a large and growing body of research documents the relationship among goals, goal progress, and

SWB. Overall, the evidence suggests that individuals who pursue personal goals that are self-selected and self-congruent tend to experience enhanced levels of SWB. Research also suggests that SWB is enhanced when we pursue goals that have a long-term orientation rather than goals that satisfy short-term needs. Finally, intrinsic goals that are group enhancing and focus on the contributions we can make to others, more than self-serving goals, tend to be more positively related to SWB.

However, the relationship between goals and SWB is more complex than simply assuming that purposeful behavior contributes to SWB. The level of challenge presented by one's goals, the approach or avoidance motivational systems of goal activities, the environmental context, and the relative autonomy of personal goals all moderate the relationship between goal attainment and SWB. In addition, research suggests that there are multiple paths to SWB and that culture influences the sort of goals and behaviors that are valued, the resources available to reach goals, and the context within which SWB is understood.

In summary, we have attempted to explore vocational psychology and personality with a focus on job performance, job satisfaction, and SWB. Our review found *Emotional Stability*, *Conscientiousness*, and *Extraversion* to be important variables related to job performance and job satisfaction. As noted by Judge et al. (2002), workers who are emotionally stable, extraverted, and conscientious may be happier at work because they are more likely to experience satisfying results at work. In addition, there is indirect evidence that appears to suggest that *Emotional Stability*, *Conscientiousness*, and *Extraversion* are important to goal selection and SWB.

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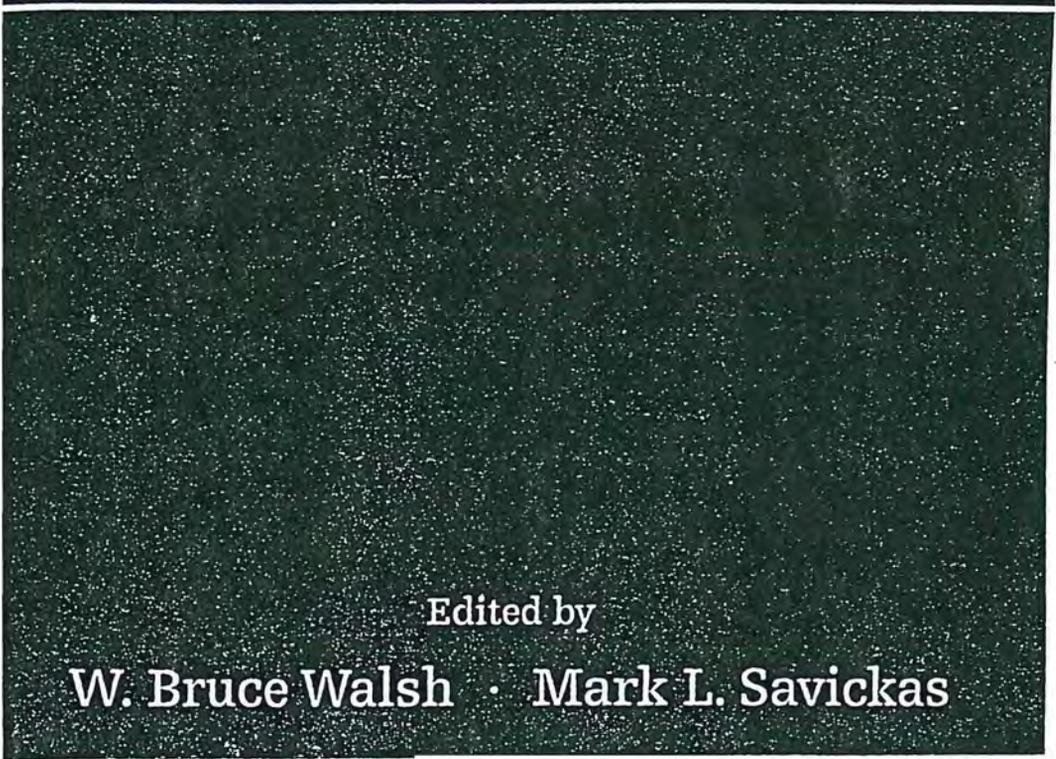
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