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The confounding role of personality and trait affectivity in the relationship between job and life satisfaction

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Summary

Previous research has demonstrated a strong positive relationship between job and life satisfaction. Traditionally, this relationship has been explained in terms of a spillover model, wherein job experiences spill over onto life, and vice versa. This study directly tests a different explanation for this relationship: personality traits that influence both job and life satisfaction. In a longitudinal test with multisource data, three typologies, which were shown by past research to be linked to both job and life satisfaction, were examined: Big Five, positive and negative affectivity, and core self-evaluations. One hundred and fifty-three university employees working in a diverse set of occupations were surveyed twice, with a six month time interval; the first survey also included a second questionnaire to be completed by a 'significant other.' Analyses of concurrent and prospective zero-order and partial correlations, as well as structural equation modeling, supported the hypothesized confounding role of all three typologies, especially core self-evaluations. Though controlling for personality reduced the magnitude of the job–life satisfaction relationship, it did not entirely eliminate it. Overall, the results suggest the presence of both dispositional and environmental factors in job and life satisfaction. Finally, implications for organizational practice and theory development are discussed. Copyright © 2002 John Wiley & Sons, Ltd.

Introduction

Job satisfaction is a pivotal construct in organizational behavior, and it is associated with important outcomes including: job performance (Judge et al., 2001b), organizational citizenship behaviors (LePine et al., 2002), absenteeism (Tharenou, 1993), and life satisfaction (Tait et al., 1989). The relationship between job and life satisfaction has been argued to be reciprocal, and indeed empirical evidence appears to support this perspective (Judge & Watanabe, 1993). The purpose of the current study is to put forth a different explanation for this relationship by arguing for the confounding role of a third variable—personality. To test for the relative and joint confounding role of various trait typologies, a

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longitudinal test with multisource data is employed. In the following sections, we discuss the various theoretical perspectives used to explain the relationship between job and life satisfaction, review evidence establishing the personological basis of both job and life satisfaction, and then, based on the literature, hypothesize a confounding role for personality and affectivity.

Relationship between job satisfaction and life satisfaction

The relationship between job and life satisfaction has received considerable attention in the organizational literature (Judge et al., 2001a; for a quantitative review see Tait et al., 1989). As such, several theoretical models have been put forth to describe the relationship between job and life satisfaction (Kabanoff, 1980; Muchinsky, 1993). These models include: (1) *spillover*, where job experiences spill over onto other spheres of life, and vice versa, suggesting that a positive relationship exists between the two variables; (2) *segmentation*, where job and life experiences have little to do with one another, suggesting that the two variables are essentially uncorrelated; and (3) *compensation*, where an individual seeks to compensate for a dissatisfying job by pursuing fulfillment and happiness in his or her non-work life, and vice versa, suggesting a negative correlation between the two variables. Judge and Watanabe (1994) argued that these different models may exist for different individuals and that individuals can be classified into each of the three groups. On the basis of a national stratified random sample of workers, they found that 68 per cent of workers could be classified as falling into the spillover group; an additional 20 per cent of individuals fell into the segmentation group, and 12 per cent fell into the compensation group. Thus, though not all agree with this conclusion (see Hart, 1999), the spillover model appears to characterize most individuals.

Support for the spillover model can also be found in a quantitative review of the literature indicating that job and life satisfaction are substantially correlated, with an average 'true score' correlation of $r = +0.44$ (Tait et al., 1989). Regarding the direction of causality of the two constructs, previous research suggests that the relationship is reciprocal—job satisfaction does affect life satisfaction, but life satisfaction also affects job satisfaction (Judge & Watanabe, 1993). An interesting alternative explanation for this relationship—based on a top-down (dispositional) model of satisfaction—is that it is caused by a third variable—personality. This alternative explanation has not been addressed in the literature and a quantitative test of its merit is very much needed. Next, we will justify the validity of this explanation by reviewing situational (briefly) and dispositional theories and findings for both job and life satisfaction.

Bottom-up and Top-down models of satisfaction

Theoretically, the job-life satisfaction relationship can be interpreted in two fundamentally different ways (Brief et al., 1993; Diener, 1984): top-down versus bottom-up. The bottom-up model is a situational explanation, suggesting that because the job is an important part of adult daily life, people who enjoy their jobs will report greater overall satisfaction with their lives. In contrast, the top-down view is a dispositional explanation, arguing that basic differences in personality and affectivity predispose people to be differentially satisfied with various aspects of their lives, including their jobs. Brief et al. (1993), using both cross sectional and longitudinal data, found support for both explanations; both negative affectivity and objective health had an indirect effect, through the interpretation of health, on life satisfaction.

Situational models of job and life satisfaction

Many situational or bottom-up factors have been examined in relation to job and life satisfaction. Job satisfaction has been linked to: pay, opportunities for promotion, working conditions and the opportunity to use valued skills and abilities (for a review see Locke, 1976). The most influential model of the effects of situational factors is the Job Characteristics Model (JCM: Hackman & Oldham, 1976) which focuses on five core job characteristics: task identity, task significance, skill variety, autonomy and feedback. Several quantitative reviews of the literature testing the relationship between workers' reports of job characteristics and job satisfaction have produced consistently positive results (Fried & Ferris, 1987; Loher et al., 1985).

In contrast, in the life satisfaction literature, objective factors (e.g., demographic variables, extreme life events)—even when considered together—have been found to account for little variance in subjective well being (for a recent review, see Diener et al., 1999). Indeed, even people facing extreme hardships (e.g., quadriplegics) or experiencing great success (e.g., lottery winners) appear to adapt quickly to these conditions, and show little if any long lasting effects on their subjective well-being (Brickman et al., 1978; Fredrick & Loewenstein, 1999; Hellmich, 1995). These considerations have led subjective well-being researchers to turn to top-down models for explaining the variability in people's life satisfaction.

In the current paper, based on the disappointing influence of situational factors on life satisfaction, and substantial evidence for the importance of personality factors for the prediction of both job and life satisfaction (see discussion below), and based on a top-down or dispositional theoretical framework, we argue that dispositional factors may partially explain the relationship between job and life satisfaction. This argument receives additional support from previous research findings (to be reviewed below) linking similar personality variables to both job and life satisfaction.

The dispositional source of job and life satisfaction

The role of personality in job satisfaction has long been recognized (e.g., Fisher & Hanna, 1931; Hoppock, 1935). However, the topic began to be studied in earnest only in the 1980s. Many of these new studies took an indirect approach in studying the dispositional source of job satisfaction. Typically, personality was not measured, but was inferred to exist based on genetic evidence from twin studies (Arvey et al., 1989) or the stability of job satisfaction across time and situations (Staw & Ross, 1985). Though these studies can be credited with renewing interest in the dispositional approach to job satisfaction, they garnered their share of criticism (Davis-Blake & Pfeffer, 1989; Gerhart, 1987; Gutek & Winter, 1992). Other studies took a more direct approach (e.g., Judge & Hulin, 1993), yet provided little integration or theoretical explanation. In the last decade, this literature has benefitted from theoretical developments with respect to three trait taxonomies: positive affectivity/negative affectivity (PA/NA), the five-factor model of personality ('Big Five'), and the more recent core self-evaluations taxonomy (Judge et al., 1997). Researchers employing these trait taxonomies have demonstrated substantial validities for personality in predicting job satisfaction (see description below, as well as, Connolly & Viswesvaran, 2000; Judge et al., in press, 1998).

Similar to job satisfaction, life satisfaction appears to be substantially dispositionally based (for a review, see Diener, 1984; Diener et al., 1999). Moreover, it appears that the same traits that predict job satisfaction also predict life satisfaction. These typologies, as well as their relevance to both job and life satisfaction, are reviewed below.

Positive and negative affectivity

Watson and colleagues (Watson & Tellegen, 1985; Watson et al., 1988) have identified two basic dimensions that broadly define affective experience, namely positive and negative affectivity (PA and NA,

respectively). Individuals high in PA are characterized by high energy, enthusiasm, and pleasurable engagement, whereas those high in NA are characterized by distress, unpleasurable engagement, and nervousness. Watson and Clark's PA/NA model has been the most widely studied taxonomy in relation to job satisfaction. For example, Agho et al. (1993), in a sample of hospital employees, found that both PA and NA were significantly correlated with job satisfaction, with PA more strongly so ($r = 0.44$, $p < 0.01$ and $r = -0.27$, $p < 0.01$, respectively). Watson and Slack (1993), in a longitudinal study of university employees, found that while trait NA was related to several job satisfaction facets, NA was not significantly correlated with overall job satisfaction at Time 1 ($r = -0.09$, n.s.) or Time 2 ($r = -0.18$, n.s.). The authors also found that PA was significantly correlated with overall job satisfaction at Time 1 ($r = 0.29$, $p < 0.05$) and Time 2 ($r = 0.33$, $p < 0.05$). Finally, in a recent meta-analysis, Connolly and Viswesvaran (2000) reported estimated true score correlations of PA and NA with job satisfaction of 0.49 ($k = 15$) and -0.33 ($k = 27$), respectively. Thus, it appears that both PA and NA display moderately strong correlations with job satisfaction, with PA being the stronger correlate.

It is hardly surprising that NA and PA are strongly related to life satisfaction (e.g., Brief et al., 1993; Judge et al., 1998). Individuals high in NA will exhibit, on average, higher levels of distress, anxiety, and dissatisfaction, and tend to focus on the unpleasant aspects of themselves, the world, the future, and other people (Larsen & Ketelaar, 1989, 1991). In contrast, the high energy and engagement, optimism, and social interest characteristic of high-PA individuals suggest that they should be more likely to be satisfied with their life (Watson, 2000; Diener et al., 1999). In fact, the content similarities between these affective traits and life satisfaction have led some researchers to view both PA/NA and life satisfaction as specific indicators of the broader construct of subjective well-being (e.g., DeNeve & Cooper, 1998).

Five-factor model

Within the last 20 years, a near-consensus has emerged that a five-factor model, often termed the 'Big Five' (Goldberg, 1990), can be used to describe the most salient aspects of personality. The five-factor structure has been captured through analyses of trait adjectives, factor analytic studies of existing personality inventories, and expert judges' categorizations of existing personality measures (McCrae & John, 1992). The Big Five traits are extraversion (or surgency), neuroticism (or emotional instability), agreeableness, conscientiousness, and openness (or culture). Though the subject of considerably less research than PA/NA, logical considerations and empirical findings also suggest a relationship between the Big Five traits and job satisfaction. The essentially negative nature of neurotic individuals (Magnus et al., 1993), the predisposition of extraverts to the experience of positive emotions (Watson & Clark, 1997), and the general work-involvement tendency that characterizes conscientious individuals (Organ & Lingl, 1995), suggest links between these factors and job satisfaction. Indeed, a recent meta-analysis (Judge et al., 2002), yielded the following estimated true score correlations: -0.29 for neuroticism ($k = 92$), 0.25 ($k = 75$) for extraversion, and 0.26 ($k = 79$) for conscientiousness. Thus, although studied less extensively than PA/NA, evidence does suggest the possible relevance of the five-factor model for job satisfaction.

In a similar manner, a review of the literature reveals that these same three Big Five traits—neuroticism, extraversion, and conscientiousness—are relevant to life satisfaction. As such, neurotic people experience more negative life events than other individuals (Magnus et al., 1993), both because they select themselves into situations that foster negative affect (Emmons et al., 1985), and because they show preferential attention to negative stimuli (Rusting & Larsen, 1998). Extraverts, in turn, seek social situations, have more friends, and find these social interactions more rewarding (Watson & Clark, 1997). Moreover, as noted earlier, they are predisposed to experience positive emotions (Costa & McCrae, 1992). McCrae and Costa (1991) suggest that conscientiousness is related to life satisfaction because the efficiency and hard-work associated with the trait foster task accomplishment. A

recent meta-analysis by DeNeve and Cooper (1998) supported these hypotheses; the uncorrected mean correlations involving life satisfaction were: neuroticism, $r = -0.24$ ($k = 44$); extraversion, $r = 0.17$ ($k = 54$); and conscientiousness, $r = 0.22$ ($k = 97$).

Core self-evaluations

Recently, Judge, Locke, and colleagues, drawing from several literatures, introduced the concept of core self-evaluations. According to Judge et al. (1997), core self-evaluations are fundamental premises that individuals hold about themselves and their functioning in the world. Judge et al. argued that core self-evaluation is a broad personality construct indicated by four specific traits: (a) self-esteem (i.e., the basic appraisal that people make of themselves), (b) generalized self-efficacy (i.e., a person's global estimate of his/her ability to mobilize the motivation, cognitive resources, and behavior needed to achieve important outcomes), (c) locus of control (i.e., the degree to which individuals believe that they control events in their lives, rather than the environment or fate), and (d) neuroticism. Two primary studies have related core self-evaluations to job satisfaction. Judge et al. (1998), analysing data across three samples, found that core self-evaluations had a total effect of 0.48 on job satisfaction when both constructs were self-reported by employees and 0.37 when core self-evaluations were measured independently (by a significant other). Judge et al. (2000) found that core self-evaluations correlated 0.41 ($p < 0.01$) with job satisfaction when both constructs were self-reported and 0.19 ($p < 0.05$) when core self-evaluations were reported by significant others. Judge and Bono (2001) completed a meta-analysis of 169 independent correlations (combined $n = 59\,871$) on the relationship between each of the four core traits and job satisfaction. When the four traits are combined into a single composite measure, the overall core trait correlated 0.37 with job satisfaction.

As mentioned before, core self-evaluations are basic conclusions or bottom-line evaluations that individuals hold about themselves and their worthiness and capability (Judge et al., 1997). As such, this construct should be related to a person's satisfaction with life. In support of this argument, Judge et al. (1998) found that core self-evaluations were positively and significantly related to life satisfaction across three diverse samples.

Hypotheses

Taken together, this review indicates that similar personality constructs play an important role in both job and life satisfaction. Because job and life satisfaction are attitudinal states, whereas personality traits are substantially heritable (e.g., according to the data of Jang et al., 1996, the Big Five traits are approximately 55 per cent inherited; for an even higher estimate due to corrections for measurement error, see Riemann et al., 1997), it stands to reason that the correlations of job and life satisfaction with personality are due to personality causing these attitudes. Accordingly, the relationship between job and life satisfaction can only be interpreted properly in the context of these dispositional influences. Consequently, we hypothesized that job satisfaction will be related to life satisfaction, and that all three taxonomies will account for at least part of the relation between job and life satisfaction. Accordingly,

Hypothesis 1: Job satisfaction and life satisfaction will be positively related.

Hypothesis 2: Controlling for positive and negative affectivity will reduce the relationship between job and life satisfaction.

Hypothesis 3: Controlling for neuroticism, extraversion, and conscientiousness will reduce the relationship between job and life satisfaction.

Hypothesis 4: Controlling for core self-evaluations¹ will reduce the relationship between job and life satisfaction.

Organizational Context

Budget Cuts Hit Public Universities in Iowa

Nation

Public universities nationwide are experiencing considerable budget cuts in higher education. The amount of tax money States use for higher education rose a total of 4.6 per cent from the past year, the smallest increase in five years, according to a survey conducted by the Center for the Study of Education Policy at Illinois State University. According to this survey, five states—Florida, Iowa, Massachusetts, Mississippi and Nebraska—are actually decreasing their higher education funding from the past year.

It is not yet clear what these findings say about the quality of State support for higher education, as they may be reflective solely of higher education's vulnerability to a downturn in the economy. In any case, State universities are making considerable cuts in academic, administration and service departments while trying not to sacrifice the quality of education they offer.

Cuts in Iowa Universities

The governor of the State of Iowa is planning a \$108 million budget cut for State agencies due to serious revenue difficulties. Nearly \$47 million of that burden would fall to the three public universities—the University of Iowa (UI), Iowa State University (ISU) and the University of Northern Iowa (UNI). At the UI, the cut is \$21.9 million, on top of the \$18.7 million the school cut earlier this year. About \$18.5 million is to be cut from ISU's budget. In the spring, the university was forced to cut \$16 million from its 2001–02 budget. UNI officials said the proposed new cuts at UNI, combined with cuts earlier this year, would total \$12 million to \$13 million.

Measures Taken to Meet Cuts

To meet the initial wave of cuts the universities have already: (a) eliminated more than 700 employee positions; (b) reduced course offerings and course sections; (c) closed and consolidated academic programmes; (d) reduced student employment and financial aid; and (e) cut back in spending for educational supplies and equipment, building repairs, and travel. However, in view of the second wave of cuts the Regents and university officials from the three State universities are trying to lobby the Legislature to reconsider the cuts because they've been hit hard twice in one year. In addition, the three university presidents are also proposing a 19.7 per cent increase in tuition and fees.

¹To investigate the validity of the core self-evaluation construct, we conducted two separate principal factor analyses of the four underlying traits for both Time 1 and Time 2 data. In both cases, a highly similar one factor solution was obtained explaining approximately 70 per cent of the variance in the four variables. In addition, high loadings were obtained for all four traits in both Time 1 (average loading = 0.78, range: 0.56–0.92) and Time 2 data (average loading = 0.78, range: 0.55–0.95). These findings seem to support the construct validity of the construct.

Implications for Employees

As a result of the recent cuts, non-academic employees are feeling less secure about their jobs as they observe downsizing. In addition, there are many rumours flying around regarding colleges, departments, or/and positions that are likely to be cut. Furthermore, employee financial prospects in terms of raises in salary or benefits have been significantly threatened. In addition, due to the elimination of jobs and an increase in tasks employees find themselves working longer hours and serving several bosses.

Method*Participants and procedure*

Participants were randomly selected from the e-mail directories of three state universities in the Midwest. Approximately 500 employees at these universities, working in a diverse set of occupations (e.g., nurses, secretaries, computer technicians, administrators), received an e-mail requesting their participation in the study in exchange for personal feedback and a small honorarium. One hundred and ninety-three individuals (39 per cent) indicated their willingness to participate. A comparison of respondents versus non-respondents revealed no significant differences with respect to gender ($z = 1.49$, n.s.), but there was a significant difference between respondents and non-respondents with respect to university ($\chi^2[2, 484] = 54.63$, $p < 0.01$). Surveys were mailed to these 193 individuals along with a cover letter assuring the participants that individual responses were confidential. Included in the mailing was a second survey to be completed by a 'significant other.' Significant others were instructed to complete the survey away from the focal person and to return it directly to the researchers in a separate postage paid envelope that was included with the questionnaire. Questionnaires were numbered so that significant other responses could be matched with those of respondents. One hundred and fifty-nine surveys were returned by respondents, representing a 32 per cent response rate. One hundred and fifty-seven significant other surveys were returned, reflecting a 31 per cent response rate. The relationships of the significant others to the respondents were as follows: spouse = 69 per cent, friend = 16 per cent, parent = 2 per cent, sibling = 1 per cent, and other = 12 per cent. Approximately six months later, the same self-report survey was sent to these employees. One hundred and thirty-eight surveys were returned by respondents, representing a 28 per cent response rate.

Use of self and significant other ratings

As noted, to provide for a rigorous test of the relationship between personality and both job and life satisfaction, we obtained both self and 'significant other' reports. This is important as it could be argued that employing only self-report data may introduce method bias (see Campbell, 1982); in other words, having a single rater provide both the personality and satisfaction data may artificially inflate the correlations. Moreover, recent meta-analytic evidence suggests that within the micro-organizational domain, the areas of job satisfaction and personality are especially susceptible to inflationary percept-percept effects (Crampton & Wagner, 1994). This maybe due to several potential reasons, including: (1) the desire of some individuals to present themselves in a socially desirable manner, and (2) an acquiescent responding style or an effort to appear consistent (Schmitt, 1994).

Our significant other data allow us to circumvent this problem by examining the personality–satisfaction association using two different raters. Based on the well-documented acquaintanceship effect in the assessment of personality traits (Funder & Colvin, 1997; Norman & Goldberg, 1966) showing that the quality of ratings improves with an increasing level of acquaintance, we instructed our participants to provide us with ratings from someone who knew them well (e.g., a close friend or family member). Indeed, Funder (1991) has suggested that self-report is a limited tool susceptible to several biases, and that the best method for trait assessment is peer report, assuming the peers had ample opportunity to observe the target. However, as peer ratings are themselves susceptible to problems and biases of their own (e.g., lack of sufficient opportunities to observe the rated characteristic, the ‘assumed similarity bias’, Funder & Colvin, 1997), we opted to use both methods of assessment. To summarize, to avoid potential problems of method bias and to provide two meaningful perspectives, each with its own virtues and flaws, we included in the current study both self and significant other reports.

Measures

Big Five traits

The Big Five personality traits were measured using the 60-item NEO-FFI (Costa & McCrae, 1992). The internal consistency reliabilities for Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness at Time 1 were as follows: 0.85, 0.82, 0.79, 0.69, and 0.83, respectively. The internal consistency reliabilities for these scales at Time 2 were as follows: 0.87, 0.82, 0.77, 0.73, and 0.80, respectively. The neuroticism scale was also used for the computation of the core self-evaluations trait.

Self-esteem

Self-esteem was measured with Rosenberg’s (1965) 10-item scale. This scale includes items such as: ‘I feel that I am person of worth, at least on an equal basis with others’ and ‘At times I think I am no good at all’ (reverse scored). The scale had a reliability of $\alpha = 0.88$ at Time 1 and $\alpha = 0.90$ at Time 2.

Generalized self-efficacy

Generalized self-efficacy was measured using Judge et al.’s (1998) 8-item measure. Respondents are asked to indicate their level of agreement with statements such as ‘I am strong enough to overcome life’s struggles’ and ‘I often feel that there is nothing that I can do well’ (reverse scored). The reliabilities at Time 1 and Time 2 were $\alpha = 0.87$ and $\alpha = 0.90$, respectively.

Locus of control

The eight internality subscale items were taken from Levenson’s (1981) locus of control measure. We chose to use this subscale (e.g., ‘When I make plans, I am almost certain to make them work’) because it reflects self-evaluation more clearly than the chance (‘I have often found that what is going to happen will happen’) or powerful others (‘Getting what I want requires pleasing people above me’) subscales. Furthermore, in our experience, using the entire scale does not improve reliability. Thus, for both theoretical and practical reasons, the internality scale seemed better suited for this study. Individuals were asked to indicate their agreement with statements regarding the extent to which they have control over events in their lives. Reliabilities at Time 1 and Time 2 were $\alpha = 0.70$ and $\alpha = 0.64$, respectively.

Positive and negative affectivity

Dispositional affect was measured with the Positive and Negative Affect Schedule (PANAS; Watson et al., 1988). The PANAS assesses both PA and NA by asking participants to indicate how often they

generally experience ten positive and ten negative emotions (e.g., determined, enthusiastic, jittery, afraid). The reliability of the PA scale was $\alpha = 0.87$ (Time 1) and $\alpha = 0.88$ (Time 2). The corresponding reliabilities for the NA scale were $\alpha = 0.85$ and $\alpha = 0.88$.

Job satisfaction

Overall job satisfaction was measured with the 5-item Brayfield–Rothe (1951) measure and three items from the Michigan Organizational Assessment Questionnaire (Cammann et al., 1979, unpublished manuscript). Participants were asked to indicate their agreement with statements such as ‘I feel fairly satisfied with my job,’ ‘Each day at work seems like it will never end’ (reverse scored). This overall measure had a reliability of $\alpha = 0.88$ at Time 1 and $\alpha = 0.90$ at Time 2. In addition, at Time 1, significant others were instructed to respond to these eight items as they imagined the focal person would ($\alpha = 0.86$).

Life satisfaction

Life satisfaction was measured with the 5-item Satisfaction with Life Scale (Diener et al., 1985). Participants were asked to indicate their agreement with statements such as ‘In most ways my life is close to ideal’ and ‘I am satisfied with my life.’ The following reliabilities were obtained: $\alpha = 0.86$ and $\alpha = 0.88$, for Times 1 and 2, respectively. At Time 1, significant others were instructed to respond to these five items as they imagined the focal person would ($\alpha = 0.90$).

Results

Table 1 presents the correlations between the Time 1 personality scores and multiple measures (Self reports—Time 1 and Time 2, significant other reports—Time 1) of both job and life satisfaction. In addition, means, standard deviations and internal consistency reliabilities are reported for these variables. For simplicity of presentation, and due to the high stability of the personality traits (stability coefficients ranged from 0.73 to 0.85) over the six-month time interval, the correlations involving these traits are based simply on the Time 1 measures.

As for the stability of the satisfaction measures, life satisfaction was more stable over time than job satisfaction (0.82 and 0.66, respectively). Nevertheless, both coefficients revealed a high degree of stability. A moderately high concurrent relation was found between job and life satisfaction ($r = 0.48$ for Time 1 self-ratings, $r = 0.48$ for Time 1 other ratings, $r = 0.44$ for Time 2 self-ratings).

The intercorrelations among the traits were strong and significant, establishing substantial similarities among the three typologies (e.g., neuroticism, NA/PA and core self-evaluations; PA and extraversion; NA and neuroticism). Moreover, the high correlations are consistent with previous discussions of the relationships among these traits, suggesting that, for example, PA is an indicator of extraversion and NA of neuroticism (Brief, 1998; Watson & Clark, 1997).

The correlations of the personality traits with self-rated job satisfaction were moderate and significant, especially for neuroticism, core self-evaluations, and PA. Smaller relationships, yet for the most part statistically significant, were found between the personality traits and the significant other reports of job satisfaction. Similar to the job satisfaction domain, significant relationships were found between the personality variables and life satisfaction. These were especially high for neuroticism, core self-evaluations and PA. Smaller relationships, yet statistically significant, were found between the personality traits and the significant other reports of life satisfaction.

Table 1. Correlations among Time 1 measures of personality and multiple assessments of job and life satisfaction

Variable	M	SD	1	2	3	4	5	6	7	8	9	10	11	12
1. Neuroticism	2.50	0.62	0.86											
2. Extraversion	3.39	0.58	-0.40 [†]	0.82										
3. Conscientiousness	3.90	0.49	-0.40 [†]	0.26 [†]	0.83									
4. CSE	2.34	0.45	-0.85 [†]	0.50 [†]	0.48 [†]	0.73								
5. Positive affectivity	3.60	0.55	-0.55 [†]	0.61 [†]	0.51 [†]	0.72 [†]	0.87							
6. Negative affectivity	1.70	0.52	0.72 [†]	-0.31 [†]	-0.35 [†]	-0.62 [†]	-0.35 [†]	0.85						
7. Job sat.—self	4.02	0.57	-0.35 [†]	0.31 [†]	0.29 [†]	0.43 [†]	0.45 [†]	-0.20*	0.88					
8. Job sat.—SOR	3.83	0.71	-0.25 [†]	0.10	0.13	0.23 [†]	0.18*	-0.17*	0.55 [†]	0.91				
9. Job sat.—Time 2	3.89	0.67	-10.36 [†]	0.25 [†]	0.21*	0.38 [†]	0.37 [†]	-0.21*	0.66 [†]	0.40 [†]	0.91			
10. Life sat.—self	3.44	0.76	-0.47 [†]	0.39 [†]	0.36 [†]	0.54 [†]	0.50 [†]	-0.38 [†]	0.48 [†]	0.32 [†]	0.44 [†]	0.86		
11. Life sat.—SOR	3.35	0.83	-0.37 [†]	0.17*	0.24 [†]	0.43 [†]	0.24 [†]	-0.22 [†]	0.33 [†]	0.48 [†]	0.39 [†]	0.62 [†]	0.90	
12. Life sat.—Time 2	3.51	0.73	-0.52 [†]	0.41 [†]	0.28 [†]	0.55 [†]	0.44 [†]	-0.40 [†]	0.43 [†]	0.27 [†]	0.44 [†]	0.82 [†]	0.56 [†]	0.87

Notes: n = 135–158.

Sat = satisfaction; SOR = significant other report.

For the personality variables the means, standard deviations (SDs) and α 's (reported on the diagonal in bold) are based on Time 1 data. Correlations for personality data are based on Time 1 data.

* $p < 0.05$ (two-tailed); [†] $p < 0.01$ (two-tailed).

Tests of the hypotheses

Tables 2 and 3 report zero-order and partial correlations, controlling for the three personality typologies assessed at Time 1, between job and life satisfaction using both self and other report data. In Table 2 we present *concurrent* correlations, whereas Table 3 focuses on *prospective* correlations examining both job and life satisfaction as potential causal determinants of the other (Judge & Watanabe, 1993). The first two columns of Table 2 display correlations that are based only on self-report data; the next two columns report correlations involving both self- and other-ratings. Table 3 uses a parallel structure to display the prospective, cross-time correlations.

Support was found for all hypotheses. Hypothesis 1 is supported in that the correlation between job and life satisfaction (see Tables 2 and 3) was significant and moderately strong in magnitude, across different methods and two time periods (correlations ranging from 0.27 to 0.48). The associations were higher for the mono-method relative to the hetero-method correlations, and slightly higher for concurrent relative to prospective correlations. To examine the effect of controlling for personality variables on the job–life satisfaction relationship (Hypotheses 2, 3 and 4) we used partial correlations and tested the significance of the difference between these correlations and the zero-order correlations.² To test the significance of this difference, we computed a *z*-statistic, which is computed as the ratio of the difference between the zero and partial order correlations (after applying Fisher's *r*-to-*Z* transformation) relative to the standard error of the difference (R. Boik, personal communication, February 18, 2002); the standard error was estimated using the delta method (Rao, 1973, p. 388).

As is shown in Tables 2 and 3, Hypothesis 2 was supported in that controlling for trait affectivity revealed a substantial (18–38 per cent) decrease in the job–life satisfaction relationship. Moreover, all eight comparisons with the zero-order correlations yielded significant results. Controlling for the three Big Five traits (neuroticism, extraversion, and conscientiousness) revealed a large decrease (28–52 per cent) in the job–life satisfaction relationship, supporting Hypothesis 3. Again, all eight comparisons with the zero-order correlations yielded significant results (see Tables 2 and 3). Controlling for core self-evaluations resulted in a 32–56 per cent reduction in the job–life satisfaction relationship, supporting Hypothesis 4. Furthermore, all eight comparisons with the zero-order correlations yielded significant results (see Tables 2 and 3). Finally, controlling for all three typologies reduced the magnitude of the job–life satisfaction relationship by 28–56 per cent; for the latter analysis; again, all differences were statistically significant (see Tables 2 and 3).

It is interesting to note that controlling for all three typologies led to a similar reduction when compared to simply controlling for core self-evaluations. These results, as well as the zero-order correlations between core self-evaluations and job and life satisfaction, point to the particularly important role played by the core self-evaluation trait in both job and life satisfaction.

Role of core self-evaluations in the job–life satisfaction relationship

Given the important role played by core self-evaluations in the job–life satisfaction relationship, we tested structural models whereby core self-evaluations influenced both job and life satisfaction, and the job–life satisfaction relationship was constrained to be zero. If such models fit the data well, it would suggest that core self-evaluations can account for the relationship between job and life satisfaction. Accordingly, four such structural equation models, estimated using LISREL 8 (Jöreskog & Sörbom, 1993), were tested. Due to the aforementioned reciprocal relationship between job and life satisfaction

²The authors would like to thank Robert Boik for pointing out the correct way for testing the statistical significance of this difference, and for providing us with the appropriate MATLAB program.

Table 2. Zero-order and partial concurrent self-report and self-report versus significant other report correlations of job satisfaction with life satisfaction

	Correlation					
	Self-report only			Self-report vs. significant other report (Time 1)		
	JS-T1, LS-T1	JS-T2, LS-T2	JS-SR, LS-SOR	JS-SR, LS-SOR	JS-SOR, LS-SR	JS-SOR, LS-SR
Zero-order job satisfaction-life satisfaction correlation						
Controlling for neuroticism (N), extraversion (E), and conscientiousness (C)	0.48[†]	0.44[†]	0.36[†]			0.29[†]
Job satisfaction-life satisfaction correlation	0.30 [†]	0.29 [†]	0.23 [†]			0.16
Reduction in correlation	38%	34%	36%			45%
Z statistic	3.77 [†]	3.15 [†]	2.86 [†]			2.50 [†]
Controlling for core self-evaluations (CSE)						
Job satisfaction-life satisfaction correlation	0.26 [†]	0.30 [†]	0.16			0.15
Reduction in correlation	46%	32%	56%			48%
Z statistic	4.52 [†]	3.21 [†]	4.15 [†]			2.71 [†]
Controlling for positive and negative affectivity (PA and NA)						
Job satisfaction-life satisfaction correlation	0.30 [†]	0.32 [†]	0.27 [†]			0.20*
Reduction in correlation	38%	27%	25%			31%
Z statistic	3.62 [†]	2.78 [†]	2.14 [†]			1.93*
Controlling for all traits (N, E, C, CSE, PA, NA)						
Job satisfaction-life satisfaction correlation	0.25 [†]	0.28 [†]	0.19*			0.15
Reduction in correlation	48%	36%	47%			48%
Z statistic	4.28 [†]	3.20 [†]	3.20 [†]			2.51 [†]

Notes: $n = 134$ (listwise).

JS = job satisfaction; LS = life satisfaction; T = Time; SR = self-report; SOR = significant other report.

A 1-side Z-statistic was used to test for significant differences between the zero-order and partial correlations.

* $p < 0.05$; $†p < 0.01$.

Table 3. Zero-order and partial prospective self-report and self-report versus significant other report correlations of job satisfaction with life satisfaction

	Correlation					
	Self-report only			Self-report vs. significant other report (T1, T2)		
	JS-T1, LS-T2	LS-T1, JS-T2	JS-SOR, LS-SR	JS-SOR, LS-SR	LS-SOR, JS-SR	LS-SOR, JS-SR
Zero-order job satisfaction-life satisfaction correlation	0.43[†]	0.44[†]	0.27[†]	0.27[†]	0.39[†]	0.39[†]
Controlling for neuroticism (N), extraversion (E), and conscientiousness (C)	0.24 [†]	0.29 [†]	0.13	0.13	0.28 [†]	0.28 [†]
Job satisfaction-life satisfaction correlation	44%	34%	52%	52%	28%	28%
<i>Reduction in correlation</i>	3.77 [†]	3.18 [†]	2.66 [†]	2.66 [†]	2.86 [†]	2.86 [†]
<i>Z statistic</i>						
Controlling for core self-evaluations (CSE)	0.21*	0.28 [†]	0.13	0.13	0.26 [†]	0.26 [†]
Job satisfaction-life satisfaction correlation	51%	36%	52%	52%	33%	33%
<i>Reduction in correlation</i>	4.42 [†]	3.20 [†]	2.79 [†]	2.79 [†]	3.23 [†]	3.23 [†]
<i>Z statistic</i>						
Controlling for positive and negative affectivity (PA and NA)	0.27 [†]	0.31 [†]	0.17*	0.17*	0.32 [†]	0.32 [†]
Job satisfaction-life satisfaction correlation	37%	30%	37%	37%	18%	18%
<i>Reduction in correlation</i>	3.40 [†]	2.86 [†]	2.10 [†]	2.10 [†]	2.23 [†]	2.23 [†]
<i>Z statistic</i>						
Controlling for all traits (N, E, C, CSE, PA, NA)	0.21*	0.27 [†]	0.12	0.12	0.28 [†]	0.28 [†]
Job satisfaction-life satisfaction correlation	51%	39%	56%	56%	28%	28%
<i>Reduction in correlation</i>	3.90 [†]	3.23 [†]	2.73 [†]	2.73 [†]	2.60 [†]	2.60 [†]
<i>Z statistic</i>						

Notes: n = 134 (listwise).
 JS = job satisfaction; LS = life satisfaction; T = time; SR = self-report; SOR = significant other report.
 A 1-side Z-statistic was used to test for significant differences between the zero-order and partial correlations.
 *p < 0.05; †p < 0.01.

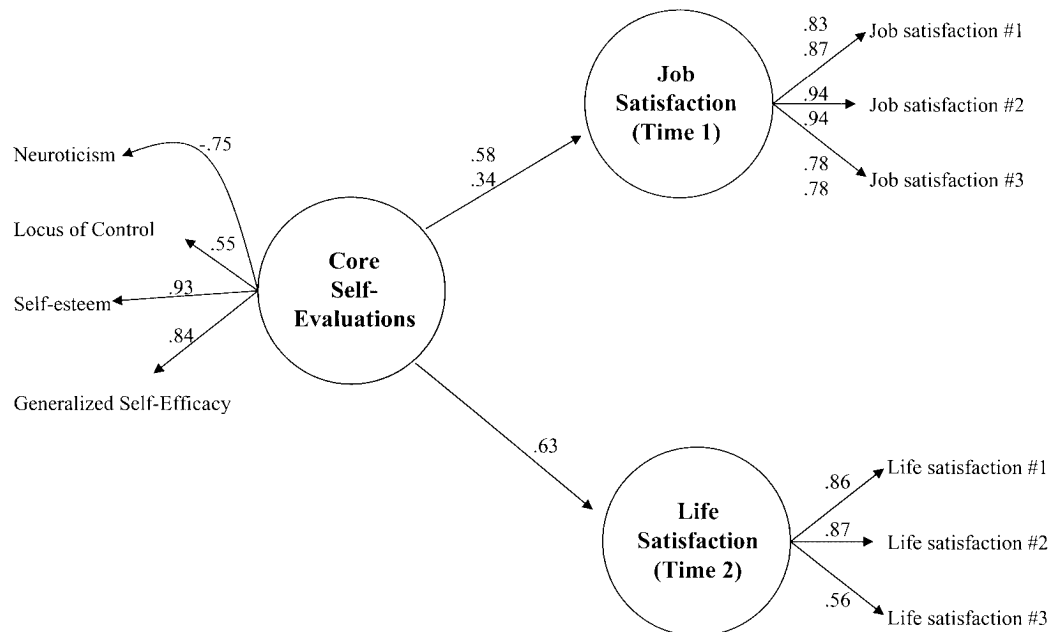


Figure 1. Models 1 and 2: LISREL estimates of relationship of job to life satisfaction, controlling for CSE. (Notes: Estimates in top row are based on Time 1 self-reported job satisfaction. Estimates in bottom row are based on Time 1 significant other measure of job satisfaction. When the same variables were used in both models we report the appropriate coefficient only once. All path coefficients and loadings were significant at $p < 0.01$)

(Judge & Watanabe, 1993), in the first two models (see Figure 1) we assumed that job satisfaction precedes life satisfaction, whereas in the latter two models we assumed that life satisfaction precedes job satisfaction (see Figure 2). In models 1 and 3 only self-report data were used, whereas in models 2 and 4 both self and significant other reports were used. For all four models the traits neuroticism, self-esteem, generalized self-efficacy, and locus of control, as assessed at Time 1, were used as indicators of the core self-evaluation latent trait. Because a minimum of three indicators is needed to identify a latent construct, three parcels of items were formed for both job and life satisfaction.³

Results of the LISREL analyses for all four models are provided in Figures 1 and 2. Fit statistics for all four models suggest that they fit the data quite well. For Model 1: $\chi^2[33] = 53.94$ ($p < 0.05$), comparative fit index (CFI) = 0.97, incremental fit index (IFI) = 0.97, root mean square error of approximation (RMSEA) = 0.07. Similar fit statistics were found for the second model: $\chi^2[33] = 61.22$ ($p < 0.05$), CFI = 0.96, IFI = 0.96, and RMSEA = 0.08. Slightly better fit indices were obtained for the third model: $\chi^2[33] = 46.12$ (n.s.), CFI = 0.99, IFI = 0.99, and RMSEA = 0.06. Finally, for the fourth model we found: $\chi^2[33] = 41.13$ (n.s.), CFI = 0.98, IFI = 0.98, and RMSEA = 0.04.

³For the job satisfaction latent factor, we used in all four models the following items for parcels: (1) items 1–3 of the job satisfaction measure; (2) items 4–6; and (3) items 7–8. However, different sources of job satisfaction data were used: in model 1 we used Time 1 job satisfaction self-reports, in model 2 we used Time 1 job satisfaction significant-other reports, and in models 3 and 4 Time 2 job satisfaction self-reports. For the life satisfaction factor, the parcels were: (1) items 1–2 of the Satisfaction with Life Scale (SWLS); (2) items 3–4 of the SWLS; and (3) item 5 of the SWLS. Again, different sources of life satisfaction data were used: in models 1 and 2 we used Time 2 life satisfaction self-reports, in model 3 we used Time 1 life satisfaction self-reports, and in model 4 Time 1 life satisfaction significant other-reports.

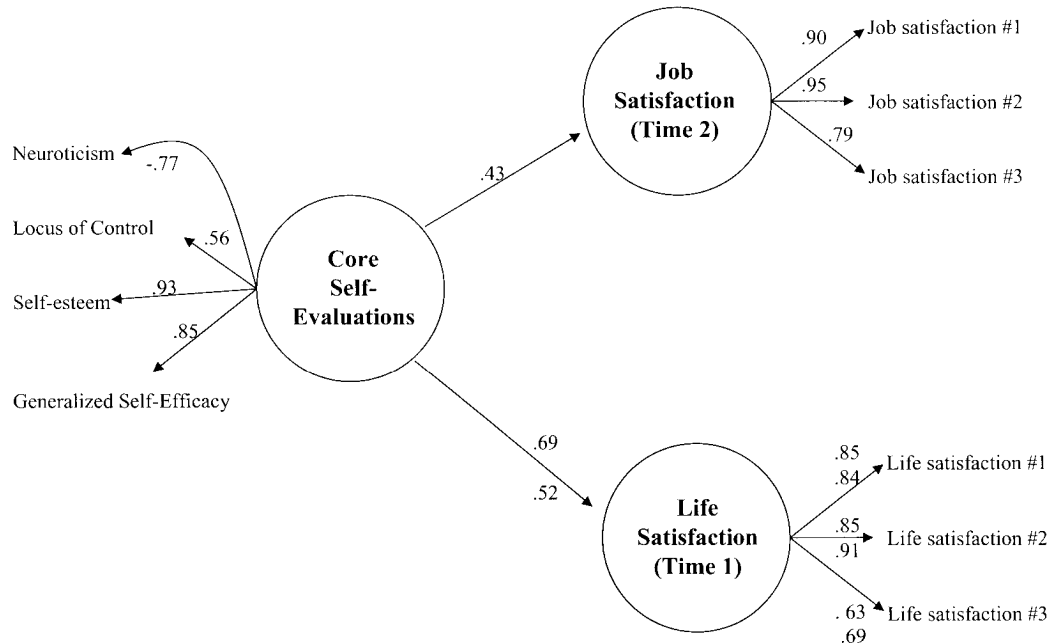


Figure 2. Models 3 and 4: LISREL estimates of relationship of life to job satisfaction, controlling for CSE. (Notes: Estimates in top row are based on Time 1 self-reported life satisfaction. Estimates in bottom row are based on Time 1 significant other measure of life satisfaction. When the same variables were used in both models we report the appropriate coefficient only once. All path coefficients and loadings were significant at $p < 0.01$)

In addition, the path coefficients between core self-evaluations and job satisfaction (average standardized path coefficient across all four models was 0.44) and core self-evaluations and life satisfaction (average standardized path coefficient across all four models was 0.62) were large and significant. These results provide considerable support for a model in which the relationship between job and life satisfaction disappears once the confounding role of core self-evaluations is taken into account.⁴

Discussion

The current study tested the confounding role of personality in the job–life satisfaction relationship. Consistent with our predictions, job and life satisfaction were relatively strongly correlated with each other. Furthermore, this relationship was reduced appreciably when controlling for three of the Big Five traits, core self-evaluations, or trait affectivity. Core self-evaluations appeared to be especially important in this regard, as revealed by both the partial correlations and structural equation modeling results. Moreover, the latter analysis showed that a model in which core self-evaluation fully mediates the relationship between job and life satisfaction fit the data well. It is noteworthy that the results in this

⁴It should be noted, also, that when we freed the path from job to life satisfaction small, yet mostly significant, coefficients were obtained: 0.25, 0.12 (n.s.), 0.37, and 0.27. However, we did not present these models because they are saturated models, wherein model fit cannot be assessed.

study emerged under relatively rigorous conditions, even when job and life satisfaction were measured with independent sources and/or six months apart.

Implications for theory

The results of this study challenge the traditional interpretation of the job–life satisfaction relationship based on the spillover or bottom-up models. Instead, we provide evidence here for the confounding role of personality in this relationship, arguing that this observed relationship may be partly spurious. These findings point to the important role of the dispositional approach in the study of both job and life satisfaction by indicating that personality (especially the core self-evaluation model) accounts for considerable overlapping variance in job and life satisfaction. However, the fact that the partial correlations are mostly significantly different than zero, also suggests that the bottom–up perspective has some merit. Indeed, Diener and Larsen (1993), based on their appraisal of the subjective well-being literature, and Brief et al. (1993) based on their empirical findings, advocate an integration of bottom–up and top–down models of subjective well-being. Although not focused on these models *per se*, our results provide indirect support for these efforts to integrate them.

Indeed, we emphasize that we do not espouse a simplistic notion that dispositional factors wholly shape or determine either job and life satisfaction. Clearly, as discussed earlier, situational factors play an important role in people’s feeling of satisfaction both on the job and in life in general. Moreover, many dispositional approaches are inherently interactional, arguing that satisfaction is a function of (a) the fit between stable aspects of the individual and his or her current environment (e.g., Tellegen, 1988), as well as (b) people’s perceptions of their situation, which are based on both objective and dispositional factors (for instance extraverts’ ‘rose-coloured glasses’; see Judge & Larsen, 2001; Rusting & Larsen, 1998). Instead, we argue here that the overlapping variance between job and life satisfaction is significantly dispositionally based. That is, despite not including any situational factors in our design (i.e., in essence rendering situational variance error variance), we were able to explain considerable joint variance in job and life satisfaction using theoretically relevant affective personality constructs. These findings suggest to us that job satisfaction should not be studied in isolation, but rather researchers should examine it in the broader context of the emotional lives of employees.

Implications for organizational practice

Similar to researchers, practitioners need to understand that job satisfaction is not simply a function of the job or of organizational characteristics, but rather reflects more broadly enduring individual differences in personality, affectivity, values and preferences. At a surface level, this could be interpreted by practitioners to mean that organizations need not invest resources in enhancing employees’ jobs, because their satisfaction with their jobs will be considerably constrained by their enduring personality characteristics. We do not support this view; whereas personality can place broad limits on the level of satisfaction experienced by employees, improving work conditions still can increase their job satisfaction by influencing how they feel, think or act on the job. We also believe it would be premature to use personality traits such as core self-evaluations in selection procedures; more predictive validity and economic utility data, are needed before such a selection process can be seriously considered. In essence, we think our findings suggest that employers need to ‘know’ their employees better—in terms of their personalities, temperament, and other characteristic tendencies. This may help employers create better training, motivational and compensation systems that are more finely tuned to their employees’ characteristics. For example, Judge and Larsen (2001) suggested that because motivational and

performance appraisal programmes can be framed either in terms of gains or losses, personality-based individual differences in responsiveness to positive and negative stimuli (for people high on PA and NA, respectively, see also Discussion below) should be taken into account in customizing these programmes to fit the characteristics of individual employees.

Limitations and future research

Generalizability to other samples

Due to concerns regarding the generalizability of our results based on a university employee sample, and the fact we did not collect additional demographic or other personal data on the employees that participated in our study, it is important that our results be replicated in other samples with different demographic and organizational characteristics. At the same time, however, we should note that the participants in our sample held a wide range of jobs that varied considerably in job level complexity (e.g., secretaries versus administrators), and that our results were highly robust across both time and data sources.

Mediating psychological processes

The primary limitation of this study is that it does not address the psychological processes through which the aforementioned top-down model operates; in other words, why or how are personality and affective traits related to job and life satisfaction? In the job satisfaction literature, this need has been voiced repeatedly (e.g., Brief, 1998; House et al., 1996). To date, however, relatively little progress has been made (some noteworthy exceptions are reviewed below), and this remains a relatively atheoretical area of research.

A useful framework to understand and model the influences of personality on job and life satisfaction is the tripartite categorization of attitudes into cognitive, affective, and behavioral elements (Eagly & Chaiken, 1993). We suggest that these traits would influence each of these elements for both job and life satisfaction. Consistent with this argument, Weiss et al. (1999) report results suggesting that job-related cognitions and moods both act as mediators in the relationship between personality and job satisfaction. In a similar manner, Judge et al. (2000) showed that both perceptions of intrinsic job characteristics (a cognitive element; see Moyle's (1995) discussion of the mediating role of perceptions of job autonomy) and the actual attainment of complex jobs (a behavioral element) contribute to the relationship between core self-evaluations and job satisfaction.

These affective, behavioral, and cognitive elements can also be used to understand personality influences on life satisfaction. Costa and McCrae (1980) suggest a mediating role for moods in the relationship of neuroticism and extraversion to subjective well-being. Rusting (1998; model 3) further elaborated this model by introducing an additional mediation stage, the processing of emotional stimuli, as a mediator between mood and job satisfaction. Behaviorally, these traits might affect life satisfaction through their influence on the situations people (i.e., neurotics, extraverts) choose to enter (Emmons et al., 1985; Watson & Clark, 1997), coping strategies (McCrae & Costa, 1986), level of goal-setting (Diener, 1984) and task accomplishments in life (McCrae & Costa, 1991). Finally, affective traits might influence life satisfaction through differential sensitivities to affect-eliciting stimuli. As such, extraversion and trait PA reflect a sensitivity to pleasurable and rewarding stimuli, whereas neuroticism and trait NA reflect differences in sensitivity to painful, aversive and stressful stimuli (Larsen & Ketelaar, 1991; Rusting & Larsen, 1998).

Drawing from Gray's seminal work regarding the biological basis of dispositional affect and personality (Gray, 1981, 1994), this differential sensitivity to stimuli appears related to individual differences in two evolutionarily adaptive bio-behavioral systems: the Behavioral Activation System (BAS),

which regulates reactions to signals of conditioned reward and non-punishment, and directs and activates organisms to approach situations or experiences that may yield pleasure and reward; and the Behavioral Inhibition System (BIS), which regulates reactions to signals of conditioned punishment and non-reward, and is related to withdrawal or inhibition of behaviors that may lead to pain or punishment (Watson et al., 1999). Depue and Collins (1999) have shown that high extraversion and trait PA are characterized by a strong BAS, whereas neuroticism and trait NA are characterized by a strong BIS. Lucas et al. (2000) further elaborated upon these ideas by providing cross-cultural evidence for reward sensitivity as the unifying core of extraversion, and suggesting that reward sensitivity causes differences in approach behavior as well as in the experience of positive affect. Taken together, these arguments suggest the following model to explain the relationship between extraversion and life satisfaction: individual differences in the BAS system cause differences in reward sensitivity (extraversion); these, in turn, are related to differential approach behaviors and episodes of positive affect; and these, in turn, are related to the overall experience of life satisfaction. This intriguing model clearly requires empirical validation.

To summarize, various mechanisms have been proposed to explain the dispositional sources of job and life satisfaction. The investigation of these psychological mechanisms is an area that clearly deserves future inquiry. Are the same mechanisms responsible for individual differences in both job and life satisfaction? Which of the various aforementioned processes are the key mediators? Dynamic models (Weiss et al., 1999) and research designs (e.g., those employing experience sampling) are needed to shed light on these underlying psychological processes.

Future research should also examine integrative models of the relationship between job and life satisfaction, combining the top-down and bottom-up perspectives of well-being. In other words, there is a need to examine both dispositional factors, especially the core self-evaluation construct, as well as situational factors that may explain the relationship between job and life satisfaction. Finally, research on the relationship between major life roles (e.g., job and marital satisfaction), with a similar design to the one employed in the current study—that is, controlling for personality and affective traits—may further increase our understanding of the mechanisms underlying satisfaction across various spheres of life.

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