

An Investigation of Personality Traits in Relation to Career Satisfaction

John W. Lounsbury

James M. Loveland

Eric D. Sundstrom

University of Tennessee, Knoxville and eCareerFit.Com

Lucy W. Gibson

Adam W. Drost

Frances L. Hamrick

eCareerFit.Com

Portions published in Journal of Career Assessment, Volume 11(3), 287-307.

Abstract

This field study examined personality traits in relation to career satisfaction and job satisfaction for a sample of 5,932 individuals in career transition. Results indicated a consistent significant relationship between personality and career satisfaction as well as job satisfaction, both in the total sample and 14 separate occupational groups. Correlations with personality traits were generally higher for career than job satisfaction. Regression analyses revealed a set of three personality traits consistently related to career satisfaction: emotional resilience, optimism and work drive in initial and holdout samples as well as in all 14 occupational groups. These three traits accounted for an average of 17% of career satisfaction variance across occupational groups. They may serve as a set of general predictors of career satisfaction because they are related to personal



adaptation to a wide range of work roles and to career changes, stress and uncertainty. Consistent with earlier research, we found other personality traits correlated with career satisfaction in certain

occupational groups, including some "Big Five" traits - conscientiousness, extroversion and openness - and other, narrower traits, such as assertiveness, customer service orientation and human managerial relations orientation. Results were discussed in terms of prior research on career

satisfaction, Holland's suggestion of a general personal competence factor for vocational behavior, Goleman's emotional intelligence, career adaptation, and the nomothetic span of personality constructs. Also discussed were study limitations, suggestions for future research and practical implications for career counseling.

An Investigation of Personality Traits in Relation to Career Satisfaction

The purpose of this study was to examine personality traits in relation to career satisfaction. Career satisfaction has been viewed as an integral factor in career success and as an important criterion for valuing an individual's career as whole (Gattiker & Larwood, 1988; 1989). Judge and his colleagues (Judge, Cable, Boudreau and Bretz; 1995; Judge, Higgins, Thoresen & Barrick, 1999) have distinguished extrinsic and intrinsic career success, with the latter encompassing career satisfaction. Following their conceptualization, we view career satisfaction as the individual's feelings of satisfaction with his or her career as a whole.

Career satisfaction has been studied in a variety of different contexts, including its relationship to: school teachers' skills, values, and professional accomplishments (Chapman, 1982); role harmony of female physicians (Walfish, Polifka, & Stenmark, 1985); salary and promotions (Seibert, Crant, & Kraimer, 1999), burnout and career stress of counselor education professionals (Bozionelos, 1996); organizational support and work pressure of female professionals and managers (Richardsen, Mikkelsen & Burke, 1997); career salience and role-management strategies of dual career couples (Bird & Russell, 1986); career mentoring (Nash, Norcross & Prochaska, 1984); differences between physicians and psychiatrists (Sturm, 2001); career plateauing (Patterson, Sutton, Schuttenberg, 1987); career choice factors for social workers (Hanson & McCullagh, 1997); work-family integration and structural work variables (Aryee, Chay & Tan, 1994); work-personal life balance of female professionals and managers (Burke, 2001); career status of female

psychologists in medical schools (Nathan, Rouse & Lubin, 1979); and demographic, human capital, motivational, organizational and industry/region variables (Judge, Cable, Boudreau & Bretz, 1995). Tharenou (1997) noted that few studies in this area have taken a personological approach. To address this lacuna, Judge, Higgins, Thoresen and Barrick (1999) investigated the “Big Five” personality traits (cf. Costa & McCrae, 1985; Digman, 1990; John, 1990) in relation to intrinsic career success. Using longitudinal data from intergenerational studies, they found that neuroticism was negatively and significantly related to intrinsic career success while openness and conscientiousness were positively and significantly related to intrinsic career success, with no significant relationships found for agreeableness and extraversion. These relationships were observed both concurrently for adults and predictively for life stages down to childhood, producing significant personality-intrinsic career success validities over a 50-year time span! Their findings clearly established the importance of personality variables in accounting for variation in intrinsic career success.

More recently, Boudreau, Boswell and Judge (2001) studied personality variables (*inter alia*) in relation to career success among U.S. and European executives. For the U.S. sample, they found that neuroticism, agreeableness and conscientiousness were negatively and significantly related to career satisfaction, whereas extraversion was positively and significantly related to career satisfaction. For the European sample, they found that neuroticism was significantly, negatively related to career satisfaction while extraversion was significantly, positively related to career satisfaction. The authors noted that the results for conscientiousness and agreeableness were inconsistent with prior research and theory and called for attempts to replicate these findings. Consistent with the above results, Seibert and Kramer (2001) found that extraversion was positively related to career satisfaction and neuroticism was negatively related to career satisfaction in a sample of 496 employees in a diverse set of occupations.

The present study was undertaken not only as a partial replication of the above-cited Big Five personality results, but also as an extension of their results by examining additional personality variables in relation to career satisfaction for executive and non-executive samples using 14 different occupational groups. While the Big Five personality model is widely regarded as a robust, general framework for conceptualizing personality traits (see, for example, Costa & McCrae, 1985; De Raad 2000; and Digman, 1990), a number of researchers contend that the Big Five is too broad and make the case for more narrow-scope personality constructs (e.g., Paunonen, Rothstein & Jackson, 1999; Paunonen & Ashton, 2001; Schneider, Hough & Dunnette, 1996). Moreover, there is much evidence for the potential usefulness of dozens of personality traits in explaining career, vocational work-related outcomes (for reviews, see Holland, 1996; Tokar, Fischer & Subich, 1998) as can be seen in vocational/career studies employing the 16 PF (e.g., Zak, Meir & Kraemer, 1979), the California Psychological Inventory (Segal, 1992), the Jackson PRF (Jackson, Paunonen & Rothstein, 1987), the Edward Personal Preference Schedule (Zagar, Arbit, Falconer & Friedland, 1983), the Comrey Personality Scales (Montag & Schwimmer, 1990), and the Omnibus Personality Inventory (O'Hara, Brown, Mentink, Morgan, 1978). Accordingly, the present study examined a broader set of personality traits than the Big Five, with the specific constructs analyzed constrained by their availability in the archival data source used for this study. In addition, in view of research focused on, and differential results found for, managers in the literature on career satisfaction (e.g., Boies & Rothstein, 2002; Boudreau et al., 2001; Burke, 2001; McKeen & Burke, 1994), as well as the extensive literature that treats managerial behavior separately from non-managerial behavior (e.g., Bass, 1990; Cooper & Robertson, 1994), we also examined managerial constructs in relation to career satisfaction.

The first goal of the present study was to investigate the relationship between career satisfaction and the following personality traits: Assertiveness, Conscientiousness, Customer Service, Emotional Resilience, Tough-Mindedness, Extraversion, Image Management, Intrinsic

Motivation, Openness, Optimism, Teamwork, and Work Drive as well as three constructs specifically for managers and leaders-- Managerial Human Relations, Participative Managerial Style and Visionary-Operational Leadership Style. Although our focus is primarily on career satisfaction, we also examined these personality and managerial traits in relation to job satisfaction, since job satisfaction is often conceptualized as a segment of and contributor to career satisfaction (e.g., Holland, 1996; Judge et al., 1999). Consistent with prior research on personality correlates of job satisfaction (e.g., Judge, Heller & Mount, 2002; Seibert & Kramer, 2001), we expected to observe several significant individual correlations with job satisfaction, especially for extraversion, neuroticism and conscientiousness. More generally, since job satisfaction references a shorter time period than career satisfaction and because personality traits represent long-term, enduring characteristics of the individual, we expected there to be a generally lower level of correlation with personality traits for job satisfaction than for career satisfaction.



Previous studies have either examined career satisfaction-personality relationships for single occupational groups or occupations in the aggregate. The present study is unique in examining the relationship between career satisfaction and personality traits in 14 occupational groups. *The second goal of this study was to examine the relationship between career satisfaction and personality traits in the following occupational groups: Accountant, Business-General, Clerical, Consultant, Customer Service, Engineering & Science, Executive, Financial Services, Human Resources, Information Technology, Management, Manufacturing, Marketing and Sales.* Again, these analyses were replicated for job satisfaction.

A third goal of the present study was to search for a general set of personality traits which are associated with career satisfaction across occupational groups. This objective was motivated by Holland's (1976) suggestion that there may be a general personological factor comprised of "adaptive dispositions" that is "a major determinant of diverse vocational behavior." To

accomplish this, we divided our total sample into two randomized groups, with the second group serving as a holdout sample to verify the general set of personality traits identified in the first sample. We then examined the generalizability of any replicated set of factors across individual occupational groups.

Method

Overview

The data for this study came from an archival source. This data source represents a convenience sample chosen by the researchers because it contained a range of occupations as well as different personality, career, and job satisfaction measures. All data was originally collected via the Internet on individuals receiving career transition services offered by an international strategic human resources company. Owing to confidentiality considerations, the identities of the companies where individuals worked were not available. All 5932 individuals in the data source between October 2001 and January 2002 were included for analysis.

Participants

Of the total sample, 59% were male; 41% were female. Relative frequencies by age group were: Under 30—9%; 30-39—28%; 40-49—37%, and 50 and over—26%. For the occupation-specific analyses in the present study, we selected occupations for which the sample size was over 100, which produced the following frequencies: Accountant—111, Business-General—121, Clerical—144, Consultant—542, Customer Service—168, Engineering & Science—232, Executive—242, Financial Services—266, Human Resources—377, Information Technology—762, Manager—887, Manufacturing—190, Marketing—321, and Sales—413. No other demographic variables were available.

Measures

Personality Traits. The personality measures used in this data source were developed by the first and fourth author as part of a larger work-based personality inventory (for validity information, see Lounsbury & Gibson, 2000; ¹ Lounsbury, Loveland, & Gibson, 2001; Lounsbury, Tatum, Chambers, Owens & Gibson, 1999). A brief description of each of the personality constructs examined in the present study is given below along with the number of items in the scale.

Assertiveness—refers to a person's asserting him/herself, taking charge of situations, speaking up on matters of importance, defending personal beliefs and being forceful. (8 items).

Conscientiousness—refers to a person's conscientiousness, reliability, trustworthiness and readiness to internalize company norms and values. (8 items).

Customer Service Orientation—striving to provide highly responsive, personalized, quality service to (internal and external) customers; putting the customer first; and trying to make the customer satisfied, even if it means going above and beyond the normal job description or policy. (6 items).

Emotional Resilience—overall level of adjustment and emotional resilience in the face of job stress and pressure. This can be conceptualized as the inverse of neuroticism. (6 items).

Extraversion—tendency to be sociable, outgoing, gregarious, warmhearted and talkative. (7 items).

Image Management—reflects a person's disposition to monitor, observe, regulate, and control the self-presentation and image s/he projects during interactions with other people and in the organization as a whole. (6 items).

Intrinsic Motivation—a disposition to be motivated by intrinsic work factors, such as challenge, meaning, autonomy, variety and significance (as opposed to extrinsic factors such as pay and earnings, benefits, status, recognition). (6 items).

Openness—receptivity/openness to change, innovation, new experience and learning. (9 items).

Optimism—refers to a person having an optimistic, hopeful outlook concerning prospects, people, and the future, even in the face of difficulty and adversity. (6 items).

Teamwork—propensity for working as part of a team and cooperatively on work group efforts. (7 items).

Tough-mindedness—appraising information and making work decisions based on logic, facts and data; not feelings, values or intuition. (8 items).

Work Drive—disposition to work for long hours (including overtime) and an irregular schedule; greater investment of one's time and energy into job and career, and being motivated to extend oneself, if necessary, to finish projects, meet deadlines, be productive and achieve job success. (7 items).

Managerial constructs. In addition, we examined three managerial constructs:

Participative Managerial Style—refers to a manager's disposition to involve subordinates in decision-making, seek input, and achieve consensus before taking action. (8 items).

Managerial Human Relations—refers to a manager's responsiveness to the concerns of his/her subordinates and being considerate of their needs and feelings. (9 items).

Visionary vs. Operational Leadership—refers to a leadership style which emphasizes creating an organizational vision and mission, developing corporate strategy, identifying long-term goals, and

planning for future contingencies versus an operational leadership style which focuses on day-to-day activities and accomplishments, short-term goals, current problems and implementation of plans. (7 items).

Career Satisfaction and Job Satisfaction. Following Judge, Cable, Boudreau and Bretz (1995), we defined career satisfaction as a satisfaction career as a whole and job satisfaction as overall satisfaction with one’s present job. Scarpello and Campbell (1983) found that such global indices of satisfaction can be more valid than facet-based measures. Owing to limitation of the data archive, only one career satisfaction and one job satisfaction item were available. These are presented below:

Job satisfaction item:

I am (was) fully satisfied with my current (or most recent) job.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am (was) not fully satisfied with my current (or most recent) job.
--	---	---

Career satisfaction item:

I am fully satisfied with my career to date.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 1 2 3 4 5	I am not very satisfied with my career to date.
--	---	--

For each of the above items, respondents were asked to choose one of the five boxes.

Internal Consistency Reliability Coefficients.

Cronbach’s coefficient alpha (Nunnally & Bernstein, 1994) was assessed for all of the measures employed in this study, with the results shown in Table 1.

Results

Table 2 presents the descriptive statistics and intercorrelations among the personality and managerial variables for the full sample, while Tables 3 and 4 present the correlations between career satisfaction and job satisfaction, respectively, and the personality and managerial traits for the full sample and by occupational group. For the full sample, most of the measures were

significantly related to both job satisfaction and career satisfaction. The median correlation



between job satisfaction and the other 15 variables in the full sample was .08; the median correlation between career satisfaction and the other 15 variables in the full sample was .15. To compare the magnitude of these two median correlation coefficients, we used a special *t* test for

comparing two “correlated” correlation coefficients (Guilford & Fruchter, 1978) and found them to be significantly different from each other: $t(5929) = 6.49, p < .01$.

The pattern of significant correlations varies by occupation, with two traits emerging as being significantly related to both job and career satisfaction for all 14 occupations—emotional resilience and optimism—and one being significantly related to job satisfaction for 10 occupations and to career satisfaction for 11 occupations—work drive.

To identify a general set of personality traits which are associated with career satisfaction across occupational groups, the sample was first randomly sorted into two groups of approximately equal size using Version 11 of SPSS (Statistical Package for the Social Sciences, 2001). The first sample contained 2979 individual cases; the second, which we are terming the “holdout sample” contained 2953 cases. A stepwise multiple regression analysis was performed in each sample with career satisfaction serving as the criterion variable and the other study variables as the predictors. The results are shown in Table 5.

As can be seen from Table 5, the same three variables emerged in the same order of entry in both samples—emotional resilience, followed by work drive and optimism. Very similar proportions of variance were accounted for by the same variable in the first and holdout samples. In the first sample, the three predictors yielded a multiple correlation of .416 ($p < .01$); in the second, they produced a multiple correlation of .420, which means that the two multiple correlations differed from each other by only .004.

Given the replication of this set of three predictors from the first to holdout samples, we used these three variables as a set to explore their applicability to the individual occupational groups. For each occupation, we conducted a series of regression analyses with the following entry procedures. First, we entered emotional resilience, optimism and work drive as a set. Next, the other measures were allowed to enter the regression in stepwise fashion. Only those contributing significantly to the prediction of career satisfaction were allowed to enter at each subsequent step. Table 6 displays the results of these analyses including the multiple correlation (R) and incremental variance accounted for by each predictor (symbolized by $R^2\Delta$) at each step.

As can be seen in Table 6, the set of emotional resilience, optimism and work drive produced significant multiple correlations with career satisfaction in all 14 occupational groups, ranging from a high of .56 ($p < .01$) for customer service to a low of .30 ($p < .01$) for Business General, with a median value of $R = .434$ across occupations. For 10 of the 14 occupational groups, other variables contributed unique incremental variance to the prediction of career satisfaction. For example, for customer service jobs, customer service and teamwork each contributed an additional 4% and 2% respectively, to the prediction of career satisfaction above the 26% accounted for by emotional resilience, optimism and work drive. However, the relative contribution of the other 12 variables was much smaller than that of the three-factor composite of emotional resilience, optimism and work drive. The average amount of variance in career satisfaction accounted for by the combination of emotional resilience, optimism and work drive across occupational groups was 17% versus 2% for all other significant predictors.

Discussion

The results of this study reinforce the proposition that personality traits are related to career success. We deal first with how our results can be compared directly with previous research and

considered as replication. The present findings of a positive relationship between career satisfaction and emotional resilience are fully consistent with and can be considered a replication of Boudreau, Boswell and Judge's (2001) finding of a negative relationship between neuroticism and career satisfaction among U.S. and European executives. Similarly, for our executive sample, the significant .16 correlation between extraversion and career satisfaction is very close to Boudreau, et al.'s significant .18 total effect for extraversion and career satisfaction in their U.S. sample of executives. Also, in our study and theirs, no significant relationship was found between openness and career satisfaction for executives. On the other hand, we found a positive correlation of .26 ($p < .01$) between conscientiousness and career satisfaction for our executive group, whereas Boudreau et al. found a significant negative relationship (total effect of $-.13$, $p < .05$) for U.S. executives. Our finding of conscientiousness as a positive significant correlate is consistent with a larger body of literature on the positive direction, work-related validity of conscientiousness (cf. Barrick & Mount, 1991; Tett, Jackson & Rothstein, 1991).

Our data also indicates the importance of Big Five personality traits as well as other personality traits beyond the Big Five in accounting for variation in career satisfaction and job satisfaction. In support of the Big Five, we found that emotional resilience, which is a direct, inverse analog of neuroticism, displayed significant relationships with career satisfaction and job satisfaction for the total sample and for all 14 occupational groups. Moreover, conscientiousness was significantly related to career satisfaction and job satisfaction in the total sample and in 9 occupational groups. Extraversion and Openness were also significantly related to career satisfaction and job satisfaction in the total sample. Additionally, the one measure which most closely resembles the Big Five trait of agreeableness in our data set is teamwork, which was significantly related to career satisfaction and job satisfaction in the total sample. The present findings are, thus, consistent with a variety of other studies showing the relationship between Big Five personality traits and career, job and other vocational outcomes (e.g., De Fruyt & Mervielde,

1999; Judge, Higgins, Thoresen and Barrick, 1999; Seibert & Cramer, 2001; Soldz & Vaillant, 1999; Tokar, Vaux & Swanson, 1995).

However, the present results also indicate the importance of other non-Big Five traits in relation to career satisfaction and job satisfaction. Most noteworthy of these are optimism, which was significantly related to career satisfaction in the total sample and in all 14 occupational groups; work drive which was significantly related to career satisfaction in the total sample and in 12 occupational groups and to job satisfaction in the total sample and in 11 occupational groups. In addition, assertiveness, customer service and tough-mindedness were significantly related to career and job satisfaction in the total sample. Each of these constructs have been found to be related to a diverse set of work-related constructs and criteria in other settings and should be considered for their potential use in future studies of career satisfaction and success. Then too, there may be some utility in studying more occupation-specific constructs which might be identified by personality-oriented job analyses (Raymark, Schmit & Guion, 1997), such as our measure of managerial human relations, which was positively and significantly related to career and job satisfaction in the Management and Executive groups, or teamwork and image management which were significantly related to (and showed incremental validity for) career satisfaction in the customer service group. The above patterns of results support the view of other researchers (e.g., Schneider, Hough & Dunnette, 1996; Paunonen, Rothstein & Jackson, 1999; Paunonen & Ashton, 2001) that additional personality traits beyond the Big Five are germane for the study of work-related behavior.

One of the main findings of this study was the identification of a set of three traits—neuroticism, optimism and work drive—which consistently emerged in the regression analyses in the first and holdout samples and which accounted for most of the variance in career satisfaction across all 14 occupational groups. The average amount of variance accounted for by these three traits was 17% across occupations versus only 3% for all other measures, which means that these three measures accounted for 85% of the explained variance in career satisfaction versus only 15%

for the other 12 measures examined. It may be that such a relatively parsimonious set of constructs will turn out to be a general or “g” factor of personality traits in research on career satisfaction and career success with the other traits constituting specific or “s” factors similar to Galton’s (1869) “g” and “s” factors which are well-established in mental ability research (Jensen, 1998). The present finding is consistent with Holland’s (1976) notion of a general personal competence factor as a determinant of vocational behavior, which he viewed as encompassing adaptability (similar to our measure of emotional resilience), self-confidence (which is akin to our measure of optimism), and aspiration (which is reflective of work drive). The three key personality traits found in the present study are also cognate to some of the key notions of Goleman’s (1995) concept of “emotional intelligence,” particularly his emphasis on optimism and emotional management.

The present findings are also consistent with the conceptual distinction between job satisfaction as a construct pertaining to a shorter time period than career satisfaction. Since personality traits represent enduring characteristics of individuals over time (Epstein, 1977), it is not surprising that we observed generally higher correlations with personality traits for career satisfaction than job satisfaction. This result further informs the construct validity of career satisfaction.

The positive relationship between emotional resilience and career satisfaction lends support to Hall’s (1987) view of the increasing importance of resilience as employees experience more pressure, strain and flux in the workplace. He contends that in this era of increasing technological and workplace change, individuals will experience more change and stress in their careers. They will “need to be able to quickly bounce back after a shock to their ego systems...(and) career resilience should become more important to career success than career planning per se. Being resilient—handling career barriers and ambiguity effectively—should be crucial for individual and organizational success” in the future. Emotional resilience could also be an important factor in *career adaptability* (Super and Kansel, 1981) and *career management*—which Savickas (2000)

suggests could become a more important function than career planning in the context of social-cultural change. Indeed, the importance of personal resilience may increase in the present era of globalization, labor market deregulation, technological advances, demographic workforce changes, and changing organizational structures (for a review of such factors as they influence the career environment, see Storey, 2000).

With regard to the other two key constructs related to career satisfaction, we note that optimism has also been found to be related to reemployment after a job loss (Leana & Feldman, 1995) and work success (Seligman, 1990), while, more generally, optimism has been found to be related to more successful outcomes of a wide variety of stressful transitions, including bone marrow transplantation, cancer treatment, childbirth, and bypass surgery (Scheier, Carver & Bridges, 2001). Since optimists have generally positive outlooks and a tendency to downplay problems as well as persist in the face of setbacks (Scheier, Carver, & Bridges, 2001), it is understandable that optimism would be positively related to career satisfaction. Whether this is because a higher level of optimism is a consequence of greater prior career success or because it emanates from a positive attributional bias or even a “positive illusion” (Norem, 2001a) is an issue for future research to resolve. In view of the fact that there was a positive relationship between optimism and career satisfaction for all 14 occupational groups considered here, one wonders if there are any occupations where this is not true or where a pessimistic disposition is related to career satisfaction. Following Seligman (1990), there may be some occupational fields where pessimism is beneficial and might lead to career satisfaction, such as accident investigation, underwriting, safety and security, auditing, food inspection, and risk management. This too, would be an interesting topic for future research.

The positive relationship between work drive and career satisfaction is also consistent with related research on the Protestant work ethic (Merrens & Garrett, 1975) and work involvement (Misra, Kanungo, Rosentiel & Stuhler, 1985) which shows a positive relationship between working

hard and job outcomes. One suspects that higher levels of career satisfaction may be the result of the rewards and positive reinforcement for individuals who work a lot of overtime and extend themselves to meet job demands. In this vein, Boudreau, Boswell and Judge (2000) found a significant positive correlation between hours worked and both income and promotions among executives, though the correlation between hours worked and career satisfaction failed to reach significance. On the other hand, there may be negative effects on career satisfaction for the extreme end of work drive—workaholism (see, e.g., Fassel, 2000; Burke, 2000, Seybold & Salomone, 1994). It should be noted that there was not a significant work drive-career satisfaction relationship for a few of the occupational groups studied here, such as Clerical. It may be that for some occupations there is not a strong enough effort-reward contingency for a significant work drive-career satisfaction relationship to emerge. Future research could examine the above questions as well as other factors that might affect the work drive-career satisfaction relationship, such as dual career status, family commitment, leisure involvement and job effort-reward contingencies.

The results of the present study have implications for career counselors and other professionals involved in career development and career transition services. For example, if the client takes a personality inventory measuring the key traits emerging in this study, the counselor could forecast probable levels of satisfaction in different career paths. The counselor may determine a more focused plan for the client based on his or her scores. This could involve targeted counseling, coaching, or development efforts. To illustrate, individuals displaying pessimism (i.e., low optimism scores) could be encouraged to develop optimism-enhancing strategies such as attributional retraining (Shatte, Gillham & Reivich, 2000) or they could learn to capitalize on their style by using a defensive pessimism strategy (Norem, 2001a; 2001b), especially if they are characteristically anxious, as this could allow them to adaptively manage their anxiety. Moreover, they could be encouraged to look into occupations where pessimism may be an asset, such as contract negotiation, inspection,



quality control, law or safety engineering (see Seligman, 1990, pp. 257-258). Finally, during the recruitment and job interview process, pessimists could be coached to avoid engaging in self-handicapping behavior (Norem, 2001a).

There are a number of limitations to the present study. First, we could only use single items to measure career and job satisfaction. A multi-item scale could lead to greater internal consistency reliability, and thus, higher levels of validity. Second, several of our occupational groups had small sample sizes, which lowered the statistical power of our analyses and therefore, may have restricted our ability to detect other significant predictors of career satisfaction in our regression analyses by occupation. Third, the individuals comprising our sample were participants in career transition services, which is of unknown generalizability to other career populations. We conjecture that one effect of using such a sample compared to individuals not in career transition would be a lowering of career satisfaction, which could result in range restriction for our measure. In that case our correlation and regression findings may be under-estimates of effects compared to what might be found in comparable research on employees who are not in career transition. Fourth, we did not examine objective indicators of career success, such as salary, earnings and tenure. Finally, another limitation of the present study is that we did not investigate the role of other variables which can directly and indirectly affect career satisfaction, such as hours worked, educational background, work centrality and organizational attributes (Boudreau, Boswell & Judge, 2000).

Nevertheless, the present results provide substantial support for the *nomothetic span* (Messick, 1989) of personality traits in relation to career satisfaction. They argue well for future research on personality factors in career success and, perhaps, other vocational outcomes. While there is growing concern about the future of “career” and nomological networks for career constructs in an era of massive socio-cultural and organizational change (see Collin & Young, 2000, especially “the death of career” as reviewed by Young & Valach, 2000, pp. 181-185), we believe that the role of personological variables will become more, not less, salient. As work-related

situational and environmental structures become more transitional, fragmented and unstable, personality variables may be the one domain characterized by relative stability (n.b. Judge, Higgins, Thoresen & Barrick, 1999; Soldz & Vaillant, 1999), which is propitious for empirical research and theory development in the career domain.

Table 1

Coefficient Alpha's for all Study Variables

Variable	Coefficient Alpha
Assertiveness	.83
Conscientiousness	.74
Customer Service	.69
Emotional Resilience	.82
Extraversion	.84
Image Management	.82
Intrinsic Motivation	.82
Managerial Human Relations	.70
Managerial Participative	.75
Openness	.80
Optimism	.86
Teamwork	.83
Tough-Mindedness	.86
Visionary Leadership	.79
Work Drive	.82

Table 2
Descriptive Statistics and Intercorrelations for the Personality and Managerial Style Variables for the Full Sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
(1) Assertiveness	---	.01	.36**	.38**	.55**	.12**	-	.32**	-	.46**	.44**	.29**	-	.35**	.41**
(2) Conscientiousness		---	.13**	.20**	.06**	-	.10**	.10**	.36**	-	.09**	<.01	.19**	-	.15**
(3) Customer Service			---	.30**	.40**	-.02	.04**	.36**	-.04*	.34**	.39**	.26**	-	.10**	.29**
(4) EmotionalLO Resilience				---	.35**	-	-.03*	.19**	-.04*	.25**	.70**	.22**	.05**	.09**	.18**
(5) Extraversion					---	.08**	-.04*	.47**	<.01	.39**	.48**	.42**	-	.22**	.24**
(6) Image Management						---	-	-.03	.02	.06**	-	.02	.30**	.14**	.09**
(7) Intrinsic Motivation							---	.13**	-	.01	.05**	.09**	-	-	-
(8) Managerial Human Relations								---	-.02	.24**	.31**	.32**	NA	.06**	.15**
(9) Managerial Participative									---	-	.06**	.09**	NA	.27**	.08**
(10) Openness										---	.36**	.31**	-.03	.42**	.33**
(11) Optimism											---	.27**	-	.21**	.25**
(12) Teamwork												---	.18**	.16**	.13**
(13) Tough-Mindedness													---	.37**	.09**
(14) Visionary Leadership														---	.15**
(15) Work Drive															---

Mean	3.66	3.25	4.36	3.46	3.84	2.69	3.46	3.94	2.52	3.87	3.86	3.56	3.10	3.05	3.38
Standard Deviation	.80	.70	.45	.71	.76	.81	.81	.56	.67	.66	.77	.78	.88	.80	.80

Sample sizes for correlations are based on sample sizes of 5932, except for correlations involving Managerial Human Relations, Managerial Participative and Visionary Leadership which are based on sample sizes of 2678.

*p<.05

**p<.01

Table 3

Correlations between Job Satisfaction and Personality Traits by Occupational Group

Trait	Full Sample (n=5932)	Accountant (n=110)	Business- General (n=117)	Clerical (n=140)	Consultant (n=542)	Customer Service (n=168)	Engineering /Science (n=232)	Executive (n=242)
Assertiveness	.12**	-.01	-.01	.04	.15**	.19*	.13*	.22**
Conscientiousness	.12**	.12	.12	.20*	.04	.19*	.26**	.23**
Customer Service	.15**	.04	.06	.02	.16**	.25**	.10	.11
Emotional Resilience	.27**	.19**	.23*	.19*	.28**	.39**	.27**	.29**
Extraversion	.13*	.06	.02	.05	.19**	.17*	.08	.12
Image Management	.06**	-.09	-.03	.16	.09*	-.24**	-.02	-.03
Intrinsic Motivation	.05**	.07	-.11	.01	.06	.08	.11	.01
Managerial Human Relations	.12**	NA	NA	NA	NA	NA	NA	NA
Manager Participative	.04*	NA	NA	NA	NA	NA	NA	NA
Openness	.04*	-.04	-.01	-.06	.11*	.05	.00	.04
Optimism	.23**	.14*	.15*	.20*	.32**	.31**	.19**	.13*
Teamwork	.08**	.01	.10	.10	.02	.14	.19**	.02
Tough-Mindedness	.05**	.14*	.22*	.20*	-.06	.12	.22**	.05
Visionary Leadership	-.05**	NA	NA	NA	NA	NA	NA	-.03
Work Drive	.15**	.15*	.15**	.14	.09*	.23**	.23**	.14*

Table 3 (Continued)

Trait	Financial Services (n=266)	Human Resources (n=377)	Information Technology (n=762)	Management (n=887)	Manufacturing (n=190)	Marketing (n=321)	Sales (n=413)
Assertiveness	.06	.19**	.06	.17**	.01	.05	.06
Conscientiousness	.24**	.04	.12**	.12**	.08	.04	.12*
Customer Service	.19**	.09	.18**	.17**	.04	.12*	.14**
Emotional Resilience	.27**	.26**	.24**	.31**	.18*	.19**	.21**
Extraversion	.12	.21**	.13**	.16**	.08	.08	.12*
Image Management	-.09	-.12*	-.04	-.12**	-.02	-.10	-.01
Intrinsic Motivation	.03	.05	.03	.06	.01	.06	-.02
Managerial Human Relations	NA	NA	NA	.19**	NA	NA	NA
Manager Participative	NA	NA	NA	.11**	NA	NA	NA
Openness	-.07	.04	.07	.05	-.14	.05	.05
Optimism	.16*	.24**	.19**	.24**	.16*	.17**	.21**
Teamwork	.01	.07	.13**	.14**	-.08	.13*	.02
Tough-Mindedness	-.09	.09	.14**	-.01	.21**	.09	-.01
Visionary Leadership	NA	NA	NA	-.07	NA	NA	NA
Work Drive	.11	.11*	.17**	.19**	-.06	.16**	.09

* p<.05 ** p<.01

Table 4

Correlations between Career Satisfaction and Personality Traits by Occupational Group

Trait	Full Sample (n=5932)	Accountant (n=110)	Business-General (n=117)	Clerical (n=140)	Consultant (n=542)	Customer Service (n=168)	Engineering/Science (n=232)	Executive (n=242)
Assertiveness	.25**	.27**	.14	.14	.19**	.27**	.24**	.17**
Conscientiousness	.11**	.05	.15	.22**	.14**	.20**	.25**	.23**
Customer Service	.21**	.16	.04	.12	.20**	.37**	.16*	.19**
Emotional Resilience	.37**	.47**	.22*	.35**	.45**	.46**	.32**	.28**
Extraversion	.22*	.24*	.13	.03	.24**	.34**	.14*	.13*
Image Management	-.04**	-.01	.07	-.15*	-.02	-.27**	.08	-.04
Intrinsic Motivation	.07**	.01	.08	.12	.15**	.21**	.12	.09
Managerial Human Relations	.14**	NA	NA	NA	NA	NA	NA	.19**
Manager Participative	-.04*	NA	NA	NA	NA	NA	NA	-.06
Openness	.15**	.11	.13	.03	.13*	.09	.15*	.06
Optimism	.37**	.28**	.15	.31**	.48**	.43**	.33**	.29**
Teamwork	.03*	.22*	.16	.16	.10*	.24**	.20**	.12
Tough-Mindedness	.04	.14	.18	.09	-.13^	-.03	.13**	.03
Visionary Leadership	.04	NA	NA	NA	NA	NA	-.03	.02
Work Drive	.21**	.36**	.22*	.08	.15**	.23**	.23**	.15*

Table 4 (Continued)

Trait	Financial Services (n=266)	Human Resources (n=377)	Information Technology (n=762)	Management (n=887)	Manufacturing (n=190)	Marketing (n=321)	Sales (n=413)
Assertiveness	.18*	.29**	.24**	.26**	.19**	.20**	.18**
Conscientiousness	.15*	.14**	.07*	.12*	.13	.01	.05
Customer Service	.19**	.17**	.21**	.22**	.19**	.10	.14**
Emotional Resilience	.41**	.36**	.36**	.40**	.28**	.26**	.28**
Extraversion	.18**	.27**	.24**	-.10	.15*	.20**	.21**
Image Management	-.06	-.08	-.03	-.10**	-.09	.01	-.04
Intrinsic Motivation	.07	.16*	.09	.13*	.03	.07	.03
Managerial Human Relations	NA	NA	NA	.19**	NA	NA	NA
Manager Participative	NA	NA	NA	-.01	NA	NA	NA
Openness	.04	.09	.16**	.15**	.11	.12*	.13**
Optimism	.34**	.32**	.37**	.39**	.23**	.28**	.30**
Teamwork	.17**	.12*	.19**	.19**	.08	.24**	.12*
Tough-Mindedness	-.12	.03	.11*	-.01	.10	-.15*	-.02
Visionary Leadership	NA	NA	NA	.02	-.03	NA	NA
Work Drive	.23**	.24**	.19**	.21**	.09	.46**	.18**

* p<.05 ** p<.01

Table 5

Results of Stepwise Multiple Regression for First and Holdout Samples

First Sample (n=2979)

Dependent Variable: Career Satisfaction

Step	Variable	Multiple R	R ²	R ² Change
1	Emotional Resilience	.378**	.14**	.14**
2	Work Drive	.403**	.16**	.02**
3	Optimism	.416**	.17**	.01**

Holdout Sample (n=2953)

Dependent Variable: Career Satisfaction

Step	Variable	Multiple R	R ²	R ² Change
1	Emotional Resilience	.384**	.15**	.14**
2	Work Drive	.417**	.17**	.02**
3	Optimism	.426**	.18**	.01**

** p<.01

Table 6

Summary of Regression Analyses for the “General Predictor” Model
of Career Satisfaction by Occupational Group

Step	Accountant (n=110)	Business -General (n=117)	Clerical (n=140)	Consultant (n=542)	Customer Service (n=168)	Engineering /Science (n=232)	Executive (n=242)
1	(Emotional Resilience, Optimism, & Work Drive) R=.531** R ² Ä=.28**	(Emotional Resilience, Optimism, & Work Drive) R=.296** R ² Ä=.09**	(Emotional Resilience, Optimism, & Work Drive) R=.370** R ² Ä=.14**	(Emotional Resilience, Optimism, & Work Drive) R=.483** R ² Ä=.22**	(Emotional Resilience, Optimism, & Work Drive) R=.506** R ² Ä=.26**	(Emotional Resilience, Optimism, & Work Drive) R=.380** R ² Ä=.14**	(Emotional Resilience, Optimism, & Work Drive) R=.324** R ² Ä=.11*
2	NONE	NONE		Intrinsic Motivation R=.496** R ² Ä=.01**	Customer Service R=.540** R ² Ä=.04**	Conscientiousness R=.413** R ² Ä=.03**	
3				Conscientiousness R=.502** R ² Ä=.006*	Teamwork R=.561** R ² Ä=.02*	Intrinsic Motivation R=.436** R ² Ä=.02*	
4							
5							

Table 6 (Continued)

Step	Financial Services (n=266)	Human Resources (n=377)	Information Technology (n=762)	Management (n=887)	Manufacturing (n=190)	Marketing (n=321)	Sales (n=413)
1	(Emotional Resilience, Optimism, & Work Drive) R=.442** R ² Ä=.19**	(Emotional Resilience, Optimism, & Work Drive) R=.409** R ² Ä=.17**	(Emotional Resilience, Optimism, & Work Drive) R=.412** R ² Ä=.17**	(Emotional Resilience, Optimism, & Work Drive) R=.440** R ² Ä=.19**	(Emotional Resilience, Optimism, & Work Drive) R=.415** R ² Ä=.17**	(Emotional Resilience, Optimism, & Work Drive) R=.316** R ² Ä=.10**	(Emotional Resilience, Optimism, & Work Drive) R=.415** R ² Ä=.17**
2	Openness R=.462** R ² Ä=.02*	Intrinsic Motivation R=.428** R ² Ä=.02**	Intrinsic Motivation R=.419** R ² Ä=.01*	Intrinsic Motivation R=.453** R ² Ä=.01**	NONE	Teamwork R=.358** R ² Ä=.03**	NONE
3	Teamwork R=.482** R ² Ä=.02*	Assertiveness R=.450** R ² Ä=.02**	Tough-Mindedness R=.427 R ² Ä=.01*				
4		Openness R=.460** R ² Ä=.01*	Teamwork R=.433 R ² Ä=.01*				

* p<.05 ** p<.01

References

- Aryee, S., Chay, Y.W, & Tan, H.H. (1994). An examination of the antecedents of subjective career success among a managerial sample in Singapore. *Human Relations*, 47(5), 487-509.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: a meta-analysis. *Personnel Psychology*, 44, 1-26.
- Bass, B. M. (1990). *Handbook of leadership (Theory, research, and managerial implications)*. New York: Free Press.
- Bird, G.W. & Russell, D.C. (1986). Career satisfaction among dual-career administrators. *Psychological Reports*, 59(3), 1127-1132.
- Boies, K. & Rothstein, M. G. (2002) Managers' interest in international assignments: The role of work and career satisfaction. *International Journal of Intercultural Relations*, 26(3), 233-253.
- Boudreau, J.W., Boswell, W.R. & Judge, T.A. (2001). Effects of personality on executive career success in the Unites States and Europe. *Journal of Vocational Behavior*, 58(1), 53-81.
- Bozionelos, N. (1996). Organizational promotion and career satisfaction. *Psychological Reports*, 79(2), 371-375.
- Burke, R. J. (2000). *Workaholism* in organizations: Psychological and physical well-being consequences. *Stress Medicine*, 16(1) 11-16.
- Burke, R.J. (2001). Organizational values, work experiences and satisfactions among managerial and professional women. *Journal of Management Development*, 20(4), 346-354.
- Chapman, D. (1982). Career satisfaction of teachers. *Educational Research Quarterly*, 7(3), 40-50.
- Collin, A. & Young, R. A. (Eds.) (2000). *The future of career*. Cambridge: Cambridge University.
- Cooper, C. L. & Robertson, I. T. (Eds). (1994). *Key reviews in managerial psychology: Concepts*

and research for practice. Oxford: Wiley.

Costa, P. & McCrae, R. (1985). *The NEO Personality Inventory (NEO-PI-R) and the NEO Five-Factor Inventory (NEO-FFI) professional manual.* Odessa, FL: Psychological Assessment Resources.

De Raad, B. (2000). *The big five personality factors (The psycholexical approach to personality).* Seattle: Hogrefe & Huber.

De Fruyt, F. & Mervielde, I. (1999). RIASEC types and big five traits as predictors of employment status and nature of employment. *Personnel Psychology*, 52(3), 701-727.

Digman, J. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41, 417-440.

Epstein, S. (1977). Traits are alive and well. In D. Magnusson & N. S. Endler (Eds.). *Personality at the crossroads: Current issues in interactional psychology.* New York: Wiley.

Fassel, D. (2000). *Working ourselves to death: The high cost of workaholism and the rewards of recovery.* New York: Universe.

Galton, F. (1869, republished in 1962). *Hereditary genius.* Cleveland: World.

Gattiker, U. E. & Larwood, L. (1988). Predictors for managers' career mobility, success, and satisfaction. *Human Relations*, 41, 568-591.

Gattiker, U. E. & Larwood, L. (1989). Career success, mobility, and extrinsic satisfaction of corporate managers. *Social Science Journal*, 25, 75-92.

Goleman, D. (1995). *Emotional intelligence.* New York: Bantam.

Guilford, J. P. & Fruchter, B. J. (1979). *Fundamental statistics in psychology and education.* New York: McGraw-Hill.

Hall, D. T. (Ed.) (1987). *Career development in organizations.* San Francisco: Jossey-Bass.

- Hanson, J.G. & McCullagh, J.G. (1997). Satisfaction with the social work profession: A ten-year analysis of undergraduate students' perceptions. *Psychological Reports, 80*, 835-838.
- Holland, J. L. (1976). Vocational preferences. In M. D. Dunnette (Ed.) *Handbook of industrial and organizational psychology*. Chicago: Rand McNally.
- Holland, J. L. (1996). Exploring careers with a typology: What we have learned and some new directions. *American Psychologist, 51*(4), 397-406.
- Jackson, D. N.; Paunonen, S. V.; Rothstein, M. G. (1987). Personnel executives: Personality, vocational interests, and job satisfaction. *Journal of Employment Counseling, 24*(3), 82-96.
- Jensen, A. (1998). *The g factor*. Westport, Connecticut: Praeger.
- John, O. (1990). The "big five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality theory and research*. (pp.66-100). New York: Guilford.
- Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz, R. D. (1995). An empirical investigation of the predictors of executive career success. *Personnel Psychology, 48*(3), 485-519.
- Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The Big Five personality traits, general mental ability, and career success cross the life span. *Personnel Psychology, 52*, 621-652.
- Judge, T. A., Heller, D., & Mount, M. K. (2002). Five-factor model of personality and job satisfaction: A meta-analysis. *Journal of Applied Psychology, 87*(3), 530-541.
- Leana, C. R. & Feldman, D. C. (1995). Finding new jobs after a plant closing: Antecedents and outcomes of the occurrence and quality of reemployment. *Human Relations, 48*, 1381-1401.
- Lounsbury, J.W. & Gibson, L.W. (2000). *Personal Style Inventory: A work-based personality measurement systems*. Knoxville, TN: Resource Associates.

- Lounsbury, J. W., Loveland, J. M., & Gibson, L. W. (2001). *Job performance validity of optimism*. Paper presented at the Society for Industrial and Organizational Psychology. Toronto, Canada.
- Lounsbury, J. W., Tatum, H.E., Chambers, W., Owens, K., & Gibson, L. W. (1999). An investigation of career decidedness in relation to “Big Five” personality constructs and life satisfaction. *College Student Journal*, 33(4), 646-652.
- McKeen, C. & Burke, R. F. (1994). An exploratory study of gender proportions on the experiences of managerial and professional women. *International Journal of Organizational Analysis*, 2(3), 280-294
- Merrens, M. & Garrett, J. (1975). The protestant ethic scale as a predictor of repetitive work performance. *Journal of Applied Psychology*, 60(1), 125-127.
- Messick, S. (1989). Validity. In R. Linn (Ed.) *Educational measurement* (3rd. Edition). London: Collier.
- Misra, S., Kanungo, R., Rosenstiel, L., & Stuhler, E. (1985). The motivational formulation of job and work involvement: A cross-national study. *Human Relations*, 38(6), 501-518.
- Montag, I., Schwimmer, M., (1990). Vocational interests and personality traits. *Man & Work*, 2(2), 77-95.
- Nash, J.M., Norcross, J.C. & Prochaska, J.O. (1984). Satisfactions and stresses of independent practice. *Psychotherapy in Private Practice*, 2(4), 39-48.
- Nathan, M. H., Rouce, S., & Lubin, B. (1979). Career satisfaction and satisfaction of women psychologists in medical schools. *Professional Psychology*, 10, 104-109.
- Norem, J. K. (2001a). *The positive power of negative thinking*. Cambridge, Massachusetts: Basic.
- Norem, J. K. (2001b). Defensive pessimism, optimism, and pessimism. In E. C. Chang (Ed.), *Optimism & pessimism: Implications for theory, research, and practice*. Washington,

D.C.: American Psychological Association.

Nunnally, J. C. & Bernstein, I. H. (1994). *Psychometric theory*. New York: McGraw-Hill.

O'Hara-Devereaux, M.; Brown, T. C., Mentink, J., & Morgan, W. A. (1978). Biographical data, personality, and vocational interests of family nurse practitioners. *Psychological Reports*, 43(3 Pt 2), 1259-1268.

Patterson, L.E., Sutton, R.E., & Schuttenberg, E.M. (1987). Plateaued careers, productivity, and career satisfaction of college education faculty. *Career Development Quarterly*, 35(3), 197-205.

Paunonen, S.V. & Ashton, M.C., (2001). Big Five factors and facets and the prediction of behavior. *Journal of Personality and Social Psychology*, 81(3), 524-539.

Paunonen, S.V., Rothstein, M.G., Jackson, D.N., (1999). Narrow meaning about the use of broad personality measures for personnel selection. *Journal of Organizational Behavior*, 20(3), 389-405.

Raymark, P. H, Schmit, M. J., & Guion, R. M. (1997). Identifying potentially useful *personality* constructs for employee selection. *Personnel Psychology*, 50(3), 723-736.

Richardsen, A.M., Mikkelsen, A., Burke, R.J. (1997). Work experiences and career and job satisfaction among professional and managerial women in Norway. *Scandinavian Journal of Management*, 13(2), 209-218.

Savickas, M L. (2000). Renovating the psychology of careers for the twenty-first century. In A. Collin. & R. A. Young (Eds.) *The future of career*. Cambridge: Cambridge University.

Scarpello, V. & Campbell, J. P. (1983). Job satisfaction: Are all the parts there? *Personnel Psychology*, 36, 577-600.

Schatte, A. J., Gillham, J. E., & Reivich, K. (2000). Promoting hope in children and adolescents. In J. E. Gillham (Ed.). *The science of hope and optimism*. Philadelphia: Templeton.

Scheier, M. F., Carver, C. S., & Bridges, M. W. (2001). Optimism, pessimism, and psychological

- well-being. In E. C. Chang (Eds.). *Optimism & pessimism: Implications for theory, research, and practice*. Washington, D.C.: American Psychological Association.
- Schneider, R.J., Hough, L. M, Dunnette, M.D. (1996). Broadsided by broad traits: How to sink science in five dimensions or less. *Journal of Organizational Behavior* 17(6), 639-655.
- Segal, U. A. (1992). Values, personality and career choice. *Journal of Applied Social Sciences*, 16(2), 143-159.
- Seibert, S.E., Crant, J.M., & Kraimer, M.L. (1999). Proactive personality and career success. *Journal of Applied Psychology*, 84(3), 416-427.
- Seibert, S. E. & Kramer, M. L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behavior*, 58(1), 1-21.
- Seligman, M. E. P. (1990). *Learned optimism*. New York: Pocket Books.
- Seybold, K. C. & Salomone, P. R. (1994). Understanding *workaholism*: A review of causes and counseling approaches. *Journal of Counseling & Development*, 73(1) 4-9.
- Soldz, S. & Vaillant, G. E. (1999). The Big Five personality traits and the life course: A 45-year longitudinal study. *Journal of Research in Personality*, 33(2), 208-232.
- Statistical Package for the Social Sciences (2001). *SPSS Base 11 Syntax Reference Guide*. Chicago, Illinois.
- Storey, J. A. (2000). 'Fracture lines' in the career environment. In A. Collin. & R. A. Young (Eds.) *The future of career*. Cambridge: Cambridge University.
- Sturm, R. (2001). Are psychiatrists more dissatisfied with their careers than other physicians?, *Psychiatric Services*, 52(5), 581.
- Super, D. E. & Knasel, E. G. (1981). Career development in adulthood: Some theoretical problems and a possible solution. *British Journal of Guidance and Counseling*, 9, 194-201.
- Tett, R. P., Jackson, D., N., & Rothstein, M. (1991). Personality measures as predictors of job performance: a meta-analytic review. *Personnel Psychology*, 44, 703-742.

- Tharenou, P. (1997). Explanations of managerial career advancement. *Australian Psychologist*, 32(1), 19-28.
- Tokar, D.M., Fischer, A.R., Subich, L.M. (1998). Personality and vocational behavior: A selective review of the literature, 1993-1997. *Journal of Vocational Behavior*, 53, 115-153.
- Tokar, D. M, Vaux, A., & Swanson, J. L. (1995). Dimensions relating Holland's vocational personality typology and the five-factor model. *Journal of Career Assessment*, 3(1), 57-74.
- Walfish, S., Polifka, J.A., & Stenmark, D.E. (1985). Career satisfaction in clinical psychology: A survey of recent graduates. *Professional Psychology: Research and Practice*, 16(4), 576-580.
- Young, R. A. & Valach, L. (2000). Reconceptualizing career theory and research: an action - theoretical perspective. In A. Collin. & R. A. Young (Eds.) *The future of career*. Cambridge: Cambridge University.
- Zagar, R. Arbit, J. Falconer, J., & Friedland, J. (1983). Vocational interests and personality. *Journal of Occupational Psychology*, 56(3), 203-214.
- Zak, I, Meir, E., & Kraemer, R. (1979). The common space of personality traits and vocational interests. *Journal of Personality Assessment*, 43(4), 424-428.