Testing Vocational Interests and Personality as Predictors of Person-Vocation and Person-Job Fit

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The fit between individuals and their work environments has received decades of theoretical and empirical attention. This study investigated two antecedents to individuals' perceptions of fit: vocational interests and personality. More specifically, the authors hypothesized that vocational interests assessed in terms of the Career Occupational Preference System Interest Inventory–Professional Level taxonomy predict perceived fit with occupations (person-vocation fit) and personality assessed in terms of the Five-Factor Model predicts perceived fit with job characteristics (person-job fit). Results indicated that vocational interests were better predictors of both perceived person-job and perceived person-vocation fit than personality. These results are discussed in terms of their implications for researchers and practitioners.

Keywords: person-vocation fit; person-job fit; vocational interests; personality; job characteristics

Person-environment (PE) fit, the compatibility between people and their work environments, is a topic that has received attention from scholars and practitioners over the course of several decades. Work on PE fit is grounded in theories such as Holland's theory of vocational behavior (Holland, 1973, 1985), the theory of work adjustment (Dawis & Lofquist, 1984), and attraction-selection-attrition theory (Schneider, 1987; Schneider, Smith, & Goldstein, 2000). These theories share a focus on the idea that personal attributes interact with environment attributes in predicting individuals' perceptions of fit with their work environments, which

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yields outcomes such as job satisfaction, organizational commitment, career path stability, and achievement or performance.

Research on PE fit tends to concentrate on the outcomes of fit (e.g., Edwards, 1991; Kristof-Brown, Zimmerman, & Johnson, 2005), with less of an emphasis on the antecedents of fit. To capitalize on the benefits of PE fit, a better understanding of the predictors that lead to higher levels of fit is both theoretically and practically necessary. Indeed, Kristof-Brown et al. (2005) called for increased research on the antecedents of fit, and the knowledge attained from such research should help guide potential employees when self-selecting into jobs and occupations and guide organizations in recruiting and selecting employees.

In what follows, we consider two individual differences domains, vocational interests and personality, as predictors of two levels of fit, person-vocation (PV) fit and person-job (PJ) fit. Whereas vocational interests have been the subject of numerous studies of PE fit, and a number of researchers have investigated the relationship between vocational interests and personality (e.g., Blake & Sackett, 1999; Carless, 1999; Hogan & Blake, 1999; Tokar & Swanson, 1995), our interest is in the extent to which each of these domains uniquely predicts individuals' perceptions of fit with vocations and with jobs. Specifically, we hypothesize that vocational interests predict PV fit and that personality predicts PJ fit, and we present and discuss findings and implications related to these hypotheses.

CONCEPTUALIZING PERSON-ENVIRONMENT FIT

PE fit can be conceptualized in a variety of ways, including the match between an individual and his or her job, group, organization, or vocation (Kristof, 1996). These different conceptualizations of fit have typically been studied independently, but researchers have called for studies that incorporate multiple types of fit in a single study, and some empirical evidence has emerged to support the conceptual distinctions among different types of fit (e.g., Cable & DeRue, 2002; Lauver & Kristof-Brown, 2001). In this study, we assessed person-vocation fit and person-job fit. A job can be defined as "the tasks a person is expected to accomplish in exchange for employment, as well as the characteristics of those tasks" (Kristof, 1996, p. 8). Jobs can therefore be characterized quite specifically in terms of their tasks, activities, and attributes (Hackman & Oldham, 1980). Vocation, however, is a broader term; within a given vocation or occupation, there may be a variety of specialized jobs that substantially vary from one another (Furnham, 2001). It is therefore useful to distinguish between jobs and vocations and to separately measure fit with regard to each of these.

Another distinction that is made in the literature on PE fit is between objective (actual) fit and subjective (perceived) fit. Subjective fit refers to the perceptions that individuals have about how well they fit a job or vocation, as opposed to objective fit, which is how well individuals' characteristics correspond to external judgments

of the job's or the vocation's characteristics (Kristof, 1996). In this study, we focused on subjective fit, given that individuals' evaluations of fit are more proximally related to outcomes that are of interest to individuals and organizations, in particular during the process of career and job choice (e.g., organizational attraction in studies by Cable & Judge, 1996, and Dineen, Ash, & Noe, 2002).

VOCATIONAL INTERESTS AND PERSON-VOCATION FIT

Theory and research on vocational interests support the idea that people search for, choose, and flourish in work environments in which there is good fit between their own characteristics and the characteristics of their occupation (Holland, 1996). Holland (1985) described a process in which individuals' preferences for certain activities lead to the creation of interests in those domains, which in turn lead people to seek environments that allow for the expression of those interests. According to Holland (1985), this model is grounded in theories that propose that the interaction between person and environment predicts behavior, an assumption that Rounds and Tracey (1990) articulated as follows: "Individuals seek out and create environments . . . that provide and/or allow for behavioral trait manifestation" (p. 18). A second assumption shared among theories of PE fit is that the "degree of fit between the person and environment is associated with significant outcomes that can substantially affect the individual and environment" (p. 18). Indeed, vocational interests have been shown to predict individuals' occupational membership (e.g., Dawis, 1991), satisfaction with work (e.g., Dawis, 1991; Rounds & Tracey, 1990), work performance (e.g., Ghiselli, 1966; Strong, 1943), and career stability (e.g., Holland, 1996).

In this study, we study vocational interests in terms of an established taxonomy that includes a broad representation of domains. A variety of typologies of vocational interests have been proposed, but the most common is Holland's (1973, 1985) model, which includes six dimensions that describe individuals as well as work environments: realistic, investigative, artistic, social, enterprising, and conventional. This study was framed in terms of a similar model as assessed by the Career Occupational Preference System Interest Inventory–Professional Level (COPS-P; Knapp-Lee, 2000a), a widely used career assessment inventory (Lombard, 1994). The COPS-P has eight broad occupational areas: science (i.e., planning and conducting research), technology (i.e., engineering and structural design), outdoor (i.e., protection and harvesting of natural resources), business (i.e., management and administration), computation (i.e., mathematics and statistical analysis), communication (i.e., oral and written communication of ideas), arts (i.e., expression of creativity and talent), and service (i.e., instructing and caring for others). These are similar to Holland's dimensions, but the COPS-P taxonomy differentiates between outdoor and technology instead of having a single realistic scale, and it differentiates between communication and arts, which would otherwise be considered under the artistic dimension.

Consistent with a large body of theory and research, we expected individuals' vocational interests to predict their perceptions of fit with regard to occupations associated with each vocational interest dimension (e.g., individuals scoring higher on service interests should report higher levels of fit with the occupation of teacher). We assessed vocational interests in terms of the COPS-P taxonomy, as noted above, and we assessed PV fit in terms of individuals' perceived fit with a set of 32 occupations (e.g., teacher, actor, lawyer). We selected occupations that would be well-known to participants and that corresponded to the dimensions of the COPS-P taxonomy; the specific occupations selected are discussed further in the Method section. Beyond the general hypothesis that vocational interests predict perceived fit with corresponding occupations, we also expected each vocational interest to relate significantly more strongly to fit with its corresponding occupations than to fit with the other occupations. For each of the eight dimensions of the COPS-P model, we propose the following hypotheses:

Hypothesis 1a: There is a significant positive relationship between each vocational interest score and perceived fit with its corresponding occupations.

Hypothesis 1b: The relationship between each vocational interest score and perceived fit with its corresponding occupations is significantly stronger than its relationships with perceived fit with other occupations.

JOB CHARACTERISTICS AND PERSON-JOB FIT

As noted earlier, a number of authors have highlighted the need for research that includes multiple types of PE fit and identifies the extent to which antecedents and outcomes differ across levels of fit. Parallel to the above hypotheses that propose that vocational interests predict perceived PV fit, in this section, we present hypotheses with regard to personality as a predictor of perceived fit with specific job characteristics (PJ fit).

Because we conceptualized PJ fit as individuals' perceptions of the extent to which they fit particular job characteristics, it first was necessary to select a set of job characteristics, just as we selected a set of occupations to assess PV fit. Instead of relying on a single a priori taxonomy of job characteristics, we used a broader set of job characteristics to represent how prospective employees perceive jobs to vary. One basis for the selection of these characteristics is work related to the Job Characteristics Model (Hackman & Oldham, 1980). In this model, five core job characteristics (skill variety, task identity, task significance, autonomy, and feedback from the job) are seen as prompting three psychological states that, in turn, affect a number of beneficial personal and work outcomes such as work effectiveness, general job satisfaction, growth satisfaction, and internal motivation (Oldham, 1996). As research has shown that a multiplicative or additive index of the model's job characteristics, reflecting job complexity, is a better predictor of the model's

psychological outcomes than any one job characteristic by itself (Fried & Ferris, 1987), we first included complexity in our set of job characteristics.

In addition, because Stone and Gueutal (1985) and Zaccaro and Stone (1988) have questioned how well the dimensions in the Job Characteristics Model actually coincide with the dimensions along which individuals generally perceive jobs to vary, we included four additional job characteristics in this study. We selected these additional job characteristics because they represent a broader array of job attributes than those included in the Job Characteristics Model and because these dimensions can be theoretically linked to the personality dimensions included in this study, as illustrated in the hypotheses presented below. Specifically, in addition to complexity, we included structure (the extent to which a job is predictable, routine, or orderly), leadership (the extent to which a job involves a position of authority, taking charge, or directing others), creativity (the extent to which a job involves innovation or imagination), and interaction (the extent to which a job is social or involves interacting with others, such as coworkers). Although there are additional dimensions along which jobs may vary, we selected this set of job characteristics to have a broad range of attributes and to establish theoretical connections to the personality dimensions included in this study.

We studied personality in terms of the Five-Factor Model (e.g., Goldberg, 1990; McCrae & Costa, 1987; Mount & Barrick, 1995), a widely used taxonomy with established validity that includes extraversion, openness to experience, conscientiousness, emotional stability, and agreeableness. Studies by Judge and Cable (1997) and Lievens, Decaesteker, Coetsier, and Geirnaert (2001) provide support for the idea that individuals' preferences for organizational characteristics vary in part based on their personality in terms of the Five-Factor Model dimensions. In this study, we extend this past research on organizational characteristics to the domain of job characteristics, given our interest in PJ fit.

We next present a set of hypotheses concerning the role of personality in contributing to individuals' perceptions of fit with five job characteristics: complexity, structure, leadership, creativity, and interaction. These hypotheses are based on the theories noted as well as on research that has found significant relationships between the dimensions of the Five-Factor Model and environmental preferences. Note that because emotional stability has not been consistently related to vocational, organizational, or job preferences, hypotheses related to this dimension are not included in this study. In addition, no hypotheses are made with regard to agreeableness, given the lack of theoretical or empirical evidence that would suggest relationships between agreeableness and fit with the job characteristic dimensions used here.

Extraversion. Some of the characteristics associated with extraversion are talkativeness, assertion, self-esteem, and ambition (McCrae & Costa, 1987). Individuals with these characteristics have been found to fit with jobs that are enterprising and,

to a lesser extent, social (Hofstee, de Raad, & Goldberg, 1992; Tokar & Swanson, 1995). These individuals have also been attracted to organizational cultures that are team-oriented and aggressive (Judge & Cable, 1997). Because these individuals fit with enterprising jobs and are attracted to aggressive cultures, we hypothesize that more extraverted individuals would report greater perceived fit with regard to jobs involving leadership. Moreover, because past research suggests that more extraverted individuals perceive fit with social jobs and are attracted to team-oriented cultures, these individuals should perceive fit with jobs that they believe have high levels of interpersonal interaction. Thus, we hypothesize the following:

Hypothesis 2a: There is a significant positive relationship between extraversion and perceived fit with the job characteristic dimension of leadership.

Hypothesis 2b: There is a significant positive relationship between extraversion and perceived fit with the job characteristic dimension of interaction.

Openness to experience. Some of the adjectives associated with openness to experience are imaginative, creative, independent, and intelligent (McCrae & Costa, 1987). Previous research has found that individuals higher on openness to experience perceive higher levels of fit with jobs that are artistic and social; research also suggests that they are attracted to organizational cultures that are innovative and detail oriented (Hofstee et al., 1992; Judge & Cable, 1997). These results suggest that individuals high on openness to experience would perceive fit with jobs that they believe to be characterized by creativity. In addition, we would expect that individuals high on openness to experience would not want to be restricted by jobs that are highly structured or routine, as these individuals are more likely to be open-minded, original, and unconventional. We therefore propose the following hypotheses:

Hypothesis 3a: There is a significant positive relationship between openness to experience and perceived fit with the job characteristic dimension of creativity.

Hypothesis 3b: There is a significant negative relationship between openness to experience and perceived fit with the job characteristic dimension of structure.

Conscientiousness. Some of the characteristics associated with conscientiousness are organized, efficient, dependable, cautious, and logical (McCrae & Costa, 1987). Research has found that conscientious individuals perceive higher levels of fit with jobs that are conventional; they have also been found to prefer organizational cultures that are outcome oriented and detail oriented (Hofstee et al., 1992; Judge & Cable, 1997). These findings suggest that these individuals would value structure at work. Therefore, we propose the next hypothesis:

Hypothesis 4: There is a significant positive relationship between conscientiousness and perceived fit with the job characteristic dimension of structure.

THE INCREMENTAL CONTRIBUTION OF PERSONALITY AND VOCATIONAL INTERESTS TO PERSON-JOB AND PERSON-VOCATION FIT

One purpose of this study was to test the relative contribution of vocational interests and personality to the prediction of PV and PJ fit. Although there have been a number of studies in which either vocational interests or personality have been assessed as antecedents of PE fit, and several studies have examined the relationship between vocational interests and personality, few researchers have included both domains to investigate the differential utility of each in terms of predicting PE fit. Because there is little research on this issue, our hypotheses are somewhat exploratory.

As vocational interests conceptually correspond to the occupation level of analysis (i.e., they represent interest in broader occupations rather than more narrow jobs), we anticipate that vocational interests will be a better predictor than personality of PV fit. This does not rule out the possibility that personality is related to PV fit, but we expect vocational interests to contribute above and beyond personality to the prediction of PV fit. Personality, on the other hand, is not expected to predict fit with occupations as well as fit with job characteristics. Moreover, personality should predict PJ fit beyond vocational interests.

Hypothesis 5a: Vocational interests demonstrate significant incremental validity over and above personality in predicting perceived person-vocation fit.

Hypothesis 5b: Personality demonstrates significant incremental validity over and above vocational interests in predicting perceived person-job fit.

METHOD

Participants

One hundred seventy-eight undergraduate students at a university in the Western United States participated in the study for extra credit in a psychology course. The majority were female (78%) and juniors or seniors (71%). Eighty-nine percent reported having held a part-time job, with an average of 3.7 years of experience, and 49% reported having held a full-time job, with 4.5 years of experience on average.

Measures

The following measures were completed as part of survey materials administered at a single point in time.

Person-vocation fit. Using a scale of 1 (*strongly disagree*) to 5 (*strongly agree*), participants indicated the degree to which they fit with 32 occupations. There were four occupations per COPS-P vocational interest dimension, and two items measuring participants' perceived fit and match with each of the occupations, for a total of eight PV fit items per dimension. Scores for each dimension were created by averaging participants' responses to the eight items on the dimension. The 32 occupations included in this study were selected from the COPS-P profile sheet (Knapp-Lee, 2000b) to represent the dimensions of the COPS-P taxonomy, based on three main criteria: the occupation had to be common such that the participants would be familiar with it, the occupation had to be a good representation of the typical occupation within its cluster, and the two occupations selected within each dimension had to differ enough to sufficiently cover the variety of occupations within the cluster. As a pilot test, a questionnaire was administered to 35 undergraduate students to ascertain their familiarity with the tasks and responsibilities of each occupation. These students indicated that they were familiar enough with all the occupations on the survey to make an accurate judgment about their level of fit with each.

Vocational interests. Vocational interests were measured with the COPS-P (Knapp-Lee, 2000a), a 192-item instrument that measures interests in science, technology, outdoors, business, computation, communication, arts, and service. Participants used a 4-point scale (L = *like very much*, l = *like moderately*, d = *dislike moderately*, and D = *dislike very much*) to respond to each item, yielding scores for each interest dimension that ranged from 1 to 36. Knapp-Lee, Michael, and Grutter (1984) demonstrated the construct validity of COPS-P scores by correlating them with scores on the Strong-Campbell Interest Inventory (SCII; Campbell & Hansen, 1981). Specifically, the pattern of correlations for the COPS-P scores with the SCII Occupational Theme scales was consistent with what would be expected theoretically, and the correlations with the SCII Basic Interest scales provided evidence of the differential validity of the COPS-P scales. Test-retest reliabilities have ranged from .87 to .99 (Knapp-Lee, 1989). In this study, alpha reliabilities ranged from .70 to .95.

Person-job fit. Using a scale of 1 (*strongly disagree*) to 5 (*strongly agree*), participants indicated the extent to which they fit with 50 job characteristics. There were 10 job characteristics for each of the five dimensions (i.e., complexity, structure, leadership, creativity, interaction), and two items measured participants' perceived fit and match with each of the job characteristics, for a total of 20 PJ fit items per job characteristic dimension. Scores for each dimension were created by averaging participants' responses to the 20 items on the dimension.

The 50 job characteristics were selected from a larger set of items based on a pilot study. This larger set of items was primarily based on Hackman and Oldham's (1980) work on the Job Characteristics Model and Stone and Gueutal's (1985) identification of additional characteristics along which jobs vary, although several additional

items were created specifically for this study. In the pilot study, 188 undergraduate students were asked to rate the degree to which they would fit with items reflecting each of the five job characteristic dimensions using a 5-point scale. Reliability analyses were used to drop items that did not load highly on each factor, yielding five items per dimension.

The final complexity scale included the following items: challenging, complex, difficult, complicated, and requires you to work hard. Structure was measured with predictable, routine, orderly, structured, and requires you to be careful. The items measuring leadership included authority, requires leadership, requires you to take charge, you have to make decisions, and direct others. Creativity was measured with artistic, imaginative, innovative, creative, and you have to think outside the box. Finally, interaction was measured with frequent interaction with coworkers, pleasant working environment, social, friendly working environment, and quality interaction with coworkers. Alpha reliabilities for these scales ranged from .88 to .91.

Personality. Using a scale of 1 (*strongly disagree*) to 5 (*strongly agree*), personality was assessed with a 50-item measure of the Five-Factor Model of personality adopted from Goldberg (1999). The instrument measures extraversion, openness to experience, conscientiousness, agreeableness, and emotional stability with five items per factor. Scores for each factor were created by averaging participants' responses to the five items on the factor. The scale has extensive validity and reliability evidence; in this study, alpha reliabilities ranged from .72 to .88.

Demographics. Participants were asked to report their age, gender, grade level, and whether and for how long they had held a part-time and/or full-time job.

RESULTS

Table 1 presents the means, standard deviations, and alpha reliabilities for each of the variables in the study, as well as a full correlation matrix. Overall, there was good support for the hypothesized relationships between vocational interests and perceived PV fit, based on correlation analyses (see Table 1). Specifically, Hypothesis 1a was supported in that the eight vocational interest dimensions were significantly positively related to individuals' perceived PV fit with the corresponding set of occupations (*r*s ranged from .45 to .66, $p < .05$). The same results were found based on regression analyses. In addition, Hypothesis 1b was largely supported in that tests for the significance of difference between dependent correlations (Cohen & Cohen, 1983) demonstrated that each COPS-P dimension was a significantly better predictor of fit with its corresponding occupations than any other dimension at the .05 level, with one exception: Fit with technology occupations was correlated at a similar level with both the computation ($r = .55$) and technology ($r = .60$) interest dimensions.

Table 1
Means, Standard Deviations, Reliabilities, and Correlations for Variables in the Study

	M	*SD*	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1. PJ fit: Complexity	3.5	.59	.89																														
2. PJ fit: Structure	3.4	.70	.88	.37*																													
3. PJ fit: Interaction	4.4	.61	.91	.41*	.31*																												
4. PJ fit: Leadership	3.8	.69	.91	.19*	–.16*	.29*																											
5. PJ fit: Creativity	3.9	.59	.91	.20*	.11	.33*	.29*																										
6. PV fit: Science	2.0	.92	.90	.15*	.06	–.17*	.17*	.04																									
7. PV fit: Tech	1.6	.70	.95	.01	–.10	–.26*	.10	.02	.59*																								
8. PV fit: Outdoor	2.1	.84	.90	.02	–.13	–.03	.00	.14	.29*	.23*																							
9. PV fit: Business	2.6	.75	.70	–.08	–.03	.02	.18*	–.13	–.08	.20	.05																						
10. PV fit: Comp	1.8	.86	.86	.13	–.01	–.08	.14	–.02	.33*	.49*	.12	.28*																					
11. PV fit: Comm	2.7	.81	.83	.01	–.12	.01	.10	.06	.05	.16*	.22*	.49*	.21*																				
12. PV fit: Art	2.9	.88	.86	–.17*	–.21*	.10	.07	.39*	.07	.15	.16*	.26*	.09	.55*																			
13. PV fit: Service	3.6	.70	.77	–.06	.05	.26*	.22*	.13	.24*	.10	.29*	.11	.11	.14	.34*																		
14. Extraversion	3.5	.75	.88	.02	–.08	–.11	–.06	–.05	–.08	–.07	.02	.13	–.08	.16*	.02	–.10																	
15. Openness	3.7	.48	.72	.09	.02	.03	.05	.10	–.10	–.12	–.06	–.03	–.13	–.01	–.01	–.09	.32*																
16. Conscientious	3.6	.58	.79	.05	.16*	–.06	–.05	–.09	–.08	–.10	.01	.00	–.05	–.07	–.08	–.04	–.08	–.07															
17. Agreeableness	4.1	.54	.78	–.05	.02	–.03	–.02	–.05	–.16*	–.11	–.02	.09	–.09	.06	.00	–.03	.27*	.23*	.19*														
18. Emotional stability	3.1	.76	.88	–.00	.06	–.13	–.15*	–.08	–.02	–.03	.02	–.07	.02	–.04	–.11	–.21*	.24*	.15*	–.04	.18*													

(continued)

Table 1 (continued)

	M	*SD*	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
19. Science interest	14.7	7.49	.94	.13	.01	–.02	.20	.09	.66*	.38*	.36*	–.05	.25*	.04	.02	.24*	–.07	–.14	–.01	–.07	–.06												
20. Tech interest	11.5	6.91	.96	.03	–.20	–.13	.10	.21*	.25*	.60*	.35*	.23*	.38*	.25*	.22*	.13	.03	–.09	–.09	.02	–.08	.44*											
21. Outdoor interest	12.8	7.55	.95	.08	–.14	–.04	.07	.18*	.26*	.30*	.66*	.10	.21*	.23*	.14	.20	.03	–.04	–.03	.02	–.09	.60*	.68*										
22. Business interest	16.1	7.75	.95	–.01	–.02	.07	.25*	.04	–.07	.25*	.02	.62*	.38*	.40	.19*	.09	.07	–.03	–.03	.00	–.15*	.01	.50*	.30*									
23. Comp interest	8.8	6.70	.89	.05	–.05	–.14	.11	.04	.26*	.55*	.06	.23*	.56*	.18*	.05	.05	–.01	–.14	–.08	–.03	–.07	.34*	.66*	.37*	.60*								
24. Comm interest	16.1	6.74	.92	.08	–.16*	.01	.12	.13	.09	.13	.21	.36*	.24*	.66*	.29*	.11	.16*	.05	–.07	–.04	–.10	.27*	.43*	.43*	.56*	.42*							
25. Art interest	17.0	7.91	.93	–.18*	–.36*	–.02	–.02	.35*	.09	.24	.23	.30	.14	.44*	.64*	.17*	.13	.05	–.09	–.06	–.11	.20*	.51*	.40*	.43*	.30*	.61*						
26. Service interest	22.3	6.55	.93	.07	.07	.34*	.25*	.14	.19*	.08	.16	.19*	.31*	.21*	.21*	.45*	–.01	–.03	–.10	–.10	–.20*	.32*	.20*	.26*	.41*	.31*	.49*	.37*					
27. Age	23.7	6.8		.10	–.13	–.15*	–.01	–.22*	–.13	–.08	.30	–.04	.05	.03	.01	–.10	.17*	–.02	.03	.02	.19*	–.03	.07	.21*	–.04	.03	.07	.00	–.09				
28. Gender	1.8	.4		–.08	.18*	–.02	–.05	.21*	–.22*	–.47*	–.29*	.05	–.29*	.09	.16*	.01	.01	.04	.16*	.06	–.01	–.16*	–.46*	–.27*	–.08	–.25*	–.02	.00	.02	–.13			
29. Year in school	3.3	1.0		–.02	–.06	–.14	–.12	–.08	.01	.08	.19*	.03	.08	–.04	–.12	–.01	.04	–.04	–.05	–.01	.09	–.02	.06	.12	–.03	.02	–.03	–.08	–.03	.19*	–.15*		
30. P-T work (months)	3.7	3.0		.02	–.03	.05	–.08	.07	–.01	–.10	.06	.04	.09	–.10	–.08	.03	.08	.02	.12	.10	–.01	.03	–.03	.08	–.01	–.07	–.05	–.16*	.05	.47*	–.06	.20*	
31. F-T work (months)	4.5	5.3		.25*	–.05	–.20*	–.02	–.22*	–.14	–.17*	.27*	–.07	.03	.03	–.05	–.21*	.22*	.02	.00	–.09	.12	–.07	–.03	.17*	–.12	–.04	.03	–.10	–.11	.91*	–.04	.06	.38*

Note. N = 178; male = 1; female = 2. Part-time (P-T) and full-time (F-T) work were measured in years. PJ = person-job; PV = person-vocation; Tech = technology; Comp = computation; Comm = communication. *$p < .05$.

Less support was found for the hypotheses involving personality and PJ fit (see Table 1). Specifically, Hypotheses 2a and 2b were not supported, as extraversion was not significantly related to fit with leadership ($r = -.06$) or interaction ($r = -.11$). Hypotheses 3a and 3b were not supported because openness to experience was not significantly related to fit with creativity ($r = .10$) or structure ($r = .02$). Hypothesis 4 was supported, however, as conscientiousness was significantly related to fit with structure ($r = .16$, $p < .05$). In addition to testing the hypotheses, post-hoc analyses testing all nonhypothesized relationships between PJ fit and personality revealed a significant relationship between emotional stability and fit with leadership ($r = -.15$). Regression analyses of these relationships yielded the same results as the correlation analyses.

The hypotheses involving the incremental contribution of vocational interests and personality in predicting PV and PJ fit received mixed support. Consistent with Hypothesis 5a, vocational interests significantly predicted all eight PV fit dimensions over and above personality (ΔR^2s ranged from .23 to .50, $p < .05$), as shown in Table 2. In addition, Table 2 reveals that vocational interests significantly predicted all five PJ fit dimensions over and above personality (ΔR^2s ranged from .12 to .19, $p < .05$). Hypothesis 5b was not supported; as shown in Table 3, hierarchical regression analyses indicated that personality did not significantly predict fit with the job characteristics over and above vocational interests (ΔR^2s ranged from .02 to .03).

DISCUSSION

Overall, we found some support for our hypotheses involving predictors of PV and PJ fit. We did support the hypotheses pertaining to the relationships between each of the vocational interest dimensions and their respective PV fit dimensions. However, with regard to personality and individuals' PJ fit, only one hypothesis was supported, involving the significant relationship between conscientiousness and fit with structure. Our hypotheses concerning the incremental contributions of vocational interests and personality in predicting PV and PJ fit were supported only with regard to the incremental contribution of vocational interests predicting PV fit; vocational interests also contributed incrementally to the prediction of PJ fit.

Vocational Interests as a Predictor of Person-Vocation Fit

As hypothesized, there were significant relationships between the vocational interest dimension scores and perceived PV fit involving related occupations. In addition, each vocational interest dimension was a significantly better predictor of PV fit with its corresponding set of occupations than any other dimension, with one exception. These findings are consistent with theories such as Holland's (1973, 1985) that involve the interaction between person and environment in

Table 2
Hierarchical Regression Analyses: Personality in First Step and Vocational Interests in Second Step, Predicting Person-Job (PJ) and Person-Vocation (PV) Fit

	PJ Fit: Complexity			PJ Fit: Structure			PJ Fit: Leadership			PJ Fit: Creativity			PJ Fit: Interaction		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.02	.02		.04	.04		.03	.03		.03	.03		.04	.04
Extraversion	.01			–.10			–.06			–.07			–.12		
Agreeableness	–.09			–.01			.01			–.03			.02		
Conscientiousness	.08			.16*			–.06			–.09			–.07		
Openness	.11			.05			.09			.14			.08		
Emotional stability	–.00			.08			–.15			–.08			–.12		
Step 2		.14*	.12*		.22*	.18*		.19*	.16*		.18*	.15*		.23*	.19*
Extraversion	.03			–.04			–.06			–.11			–.11		
Agreeableness	–.11			–.03			.01			–.01			.04		
Conscientiousness	.09			.15*			–.05			–.05			–.06		
Openness	.14			.07			.12			.13			.04		
Emotional stability	–.00			.08			–.10			–.03			–.05		
Science	.09			.09			.27*			–.03			–.04		
Technology	.16			–.06			.12			.18			–.02		
Outdoor	–.01			–.05			–.17			.03			.01		
Business	–.07			.17			.34*			–.13			.16		
Computation	–.01			–.02			–.19			–.08			–.28*		
Communication	.23*			–.05			.01			–.11			–.12		
Arts	–.42*			–.42*			–.24*			.36*			–.08		
Service	.09			.22*			.16			.10			.45*		

	PV Fit: Science			PV Fit: Technology			PV Fit: Outdoor			PV Fit: Business		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.03	.03		.03	.03		.01	.01		.04	.04
Extraversion	–.04			–.03			.04			.16		
Agreeableness	–.12			–.06			–.02			.09		
Conscientiousness	–.07			–.10			.01			–.02		
Openness	–.07			–.10			–.07			–.09		
Emotional stability	.02			–.00			.03			–.11		
Step 2		.51*	.48*		.49*	.46*		.51*	.50*		.44*	.40*
Extraversion	–.01			–.03			.02			.06		
Agreeableness	–.10			–.10			–.05			.09		
Conscientiousness	–.04			–.03			.04			–.02		
Openness	.04			.02			–.07			–.10		
Emotional stability	.01			.01			.10			–.01		
Science	.71*			.23*			–.09			–.03		
Technology	.06			.54*			–.00			.02		
Outdoor	–.21*			–.24*			.79*			–.07		
Business	–.22*			–.06			–.14			.71*		
Computation	.18*			.31*			–.16			–.22*		
Communication	–.03			–.17*			–.03			.08		
Arts	.04			.06			.04			.05		
Service	.03			–.06			.11			–.06		

(continued)

Table 2 (continued)

	PV Fit: Computation			PV Fit: Communication			PV Fit: Arts			PV Fit: Service		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.03	.03		.04	.04		.03	.03		.05	.05
Extraversion	–.05			.19*			.08			–.05		
Agreeableness	–.05			.05			.02			.04		
Conscientiousness	–.05			–.07			–.12			–.07		
Openness	–.12			–.07			–.05			–.06		
Emotional stability	.06			–.09			–.10			–.20*		
Step 2		.37*	.34*		.50*	.46*		.46*	.44*		.28*	.23*
Extraversion	–.07			.03			–.03			–.05		
Agreeableness	–.07			.09			.08			.06		
Conscientiousness	.02			–.07			–.08			–.02		
Openness	–.03			–.12			–.10			–.06		
Emotional stability	.13			.01			–.00			–.11		
Science	.05			–.09			–.02			.08		
Technology	.11			.02			.03			.11		
Outdoor	–.05			.00			–.06			.07		
Business	.09			.13			.01			–.04		
Computation	.43*			–.17			–.16			–.17		
Communication	–.04			.70*			–.06			–.16		
Arts	–.10			.07			.73*			.05		
Service	.19*			–.14			.04			.50*		

*$p \leq .05$.

predicting behavior, because individuals indicated that they perceived fit with those occupations that aligned with their vocational interests. Furthermore, these results are encouraging in that they not only support past theory and research but also extend past studies by employing an eight-dimensional taxonomy of interests (Knapp-Lee, 2000a) instead of the traditional six-factor RIASEC model (Holland, 1973, 1985). We therefore encourage the incorporation of this taxonomy of interests in further research, as well as investigations with regard to this set of dimensions and objective PV fit.

Personality as a Predictor of Person-Job Fit

Of the hypothesized relationships between personality and PJ fit, the only one supported was between conscientiousness and fit with jobs involving structure. As predicted, these results suggest that individuals higher on conscientiousness appear to value jobs that are structured, predictable, or routine. A relationship between emotional stability and fit with leadership was also found, suggesting that people who are higher in emotional stability may not prefer positions of power, although the nature of this relationship is somewhat puzzling and merits further research.

This lack of results as a whole was somewhat surprising considering the theoretical linkage between personality and PJ fit, as well as previous research that has found relationships between the Big Five personality characteristics and PE fit (e.g., Hofstee et al., 1992; Judge & Cable, 1997; Tokar & Swanson, 1995). It is

Table 3
Hierarchical Regression Analyses: Vocational Interests in First Step and Personality in Second Step, Predicting Person-Job and Person-Vocation Fit

	PJ Fit: Complexity			PJ Fit: Structure			PJ Fit: Leadership			PJ Fit: Creativity			PJ Fit: Interaction		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.11*	.11*		.19*	.19*		.17*	.17*		.16*	.16*		.21*	.21*
Science	.08			.10			.25*			–.04			–.04		
Technology	.14			–.09			.13			.18			–.01		
Outdoor	–.00			–.04			–.16			.03			.01		
Business	–.06			.18			.35*			–.14			.16		
Computation	–.04			–.03			–.20			–.09			–.28*		
Communication	.26*			–.05			.01			–.12			–.14		
Arts	–.40*			–.42*			–.23*			.37*			–.08		
Service	.08			.19*			.19*			.12			.47*		
Step 2		.14*	.03		.22*	.03		.19*	.03		.18*	.02		.23*	.02
Science	.09			.09			.27*			–.03			–.04		
Technology	.16			–.06			.12			.18			–.02		
Outdoor	–.01			–.05			–.17			.03			.01		
Business	–.07			.17			.34*			–.13			.16		
Computation	–.01			–.02			–.19			–.08			–.28*		
Communication	.23*			–.05			.01			–.11			–.12		
Arts	–.42*			–.42*			–.24*			.36*			–.08		
Service	.09			.22*			.16			.10			.45*		
Extraversion	.03			–.04			–.06			–.11			–.11		
Agreeableness	–.11			–.03			.01			–.01			.04		
Conscientiousness	.09			.15*			–.05			–.05			–.06		
Openness	.14			.07			.12			.13			.04		
Emotional stability	–.00			.08			–.10			–.03			–.05		

	PV Fit: Science			PV Fit: Technology			PV Fit: Outdoor			PV Fit: Business		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.50*	.50*		.42*	.42*		.48*	.48*		.49*	.49*
Science	.71*			–.03			.24*			–.07		
Technology	.06			.04			.53*			–.01		
Outdoor	–.22*			–.07			–.25*			.78*		
Business	–.23*			.71*			–.07			–.15		
Computation	.19*			–.22*			.32*			–.14		
Communication	–.03			.09			–.17*			–.03		
Arts	.05			.04			.07			.03		
Service	.04			–.07			–.05			.09		
Step 2		.51*	.01		.44*	.02		.49*	.01		.51*	.01
Science	.71*			–.03			.23*			–.09		
Technology	.06			.02			.54*			–.00		
Outdoor	–.21*			–.07			–.24*			.79*		
Business	–.22*			.71*			–.06			–.14		
Computation	.18*			–.22*			.31*			–.16		
Communication	–.03			.08			–.17*			–.03		

(continued)

Table 3 (continued)

	PV Fit: Science			PV Fit: Technology			PV Fit: Outdoor			PV Fit: Business		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Arts	.04			.05			.06			.04		
Service	.03			–.06			–.06			.11		
Extraversion	–.01			.06			–.03			.02		
Agreeableness	–.10			.09			–.10			–.05		
Conscientiousness	–.04			–.02			–.03			.04		
Openness	.04			–.10			.04			–.07		
Emotional stability	.01			–.01			.01			.10		
	PVFit: Computation			**PVFit: Communication**			**PVFit: Arts**			**PVFit: Service**		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Step 1		.34*	.34*		.48*	.48*		.45*	.45*		.26*	.26*
Science	.07			–.09			–.02			.08		
Technology	.10			.04			.05			.12		
Outdoor	–.07			–.01			–.07			.07		
Business	.07			.12			.01			–.03		
Computation	.45*			–.16			–.14			–.17		
Communication	–.05			.70*			–.08			–.19		
Arts	–.10			.06			.72*			.05		
Service	.18*			–.14*			.05			.52*		
Step 2		.37*	.02		.50*	.02		.46*	.02		.28*	.02
Science	.05			–.09			–.02			.08		
Technology	.11			.02			.03			.11		
Outdoor	–.05			.00			–.06			.07		
Business	.09			.13			.01			–.04		
Computation	.43*			–.17*			–.16			–.17		
Communication	–.04			.70*			–.06			–.16		
Arts	–.09			.07			.73*			.05		
Service	.19*			–.14			.04			.50*		
Extraversion	–.07			.03			–.03			–.05		
Agreeableness	–.07			.09			.08			.06		
Conscientiousness	.02			–.07			–.08			–.02		
Openness	–.03			–.12			–.10			–.06		
Emotional stability	.13			.01			–.00			.08		

*$p \leq .05$.

useful to speculate as to why this was the case. Validity or faking do not seem to be viable explanations, because the correlations between factors were consistent with other research (Goldberg, 1999) and because significant results were found for vocational interests. Is it possible that there is systematic variability in individuals' preferences for jobs but that whatever that variability might be does not correlate with personality? The fact that other individual differences not measured here (e.g., cognitive ability) could relate to PJ fit does not imply that personality would not also correlate. If we assume that personality is a stable

characteristic (e.g., Goldberg, 1990; McCrae & Costa, 1985), there is no reason to think that individuals with stable characteristics would not have similar preferences. In addition, the job characteristics were selected to theoretically relate to these personality characteristics. On the criterion side, the job characteristic dimensions had high internal reliabilities, and the fact that the dimensions did not correlate too highly also provides some evidence that these are valid job characteristic dimensions.

One issue that could explain why we found greater support for the PV fit hypotheses as compared to the PJ fit hypotheses is commensurate measurement, which exists when the characteristics of the person and the environment are assessed in similar terms or with regard to the same content dimensions (Edwards, 1991, 1994). The occupations included in the PV fit measure were designed to be commensurate with the dimensions of the vocational interest measure, and findings supported the hypothesized relationships between vocational interests and predicted PV fit with corresponding occupations. On the other hand, although the job characteristic dimensions involved in the PJ fit measure were conceptually related to the personality dimensions (yielding Hypotheses 2-4), commensurate measurement was not present, which may have contributed to the weaker support for these hypotheses.

We recommend that future studies investigate the issue of commensurate measurement, and we encourage further research involving different samples and/or different job characteristics to reach a stronger conclusion about the relationship between the dimensions of the Five-Factor Model of personality and PJ fit.

Personality and Vocational Interests as Predictors of Person-Job and Person-Vocation Fit

Hypothesis 5 was partially supported in that vocational interests predicted perceived PV fit over and above personality, but the finding that vocational interests significantly predicted perceived PJ fit over and above personality was unexpected. Although existing literature does not directly address the differential predictability of personality and vocational interests in predicting PV and PJ fit, there is some evidence for personality as a valid predictor of both PV and PJ fit (e.g., Hofstee et al., 1992; Judge & Cable, 1997; Tokar & Swanson, 1995). We therefore considered reasons for the lack of findings with regard to personality. First, the high internal reliabilities for the dimensions help rule out the possibility that the personality dimensions were parceled out incorrectly. In addition, a post-hoc set correlation (Cohen, Cohen, West, & Aiken, 2003) was run to test whether the lack of a relationship was based on the way the scales were developed. This analysis, which specified the upper threshold of the common variance between personality and PJ fit, indicated no way to divide the personality items into scales that would yield a significant relationship between personality and PJ fit. We also raised the possibility that the set of job characteristics selected favored their correlations with vocational interests as opposed to personality, but this is doubtful as well, in particular because part of the rationale for the selection of the job characteristic dimensions was their theoretical link to the personality dimensions.

In reflecting on these results, however, the findings that the vocational interests predict PJ fit make some sense. The vocational interests measure used here is made up of items in which the respondent indicates the degree of liking for particular tasks involved in occupations. These tasks vary in specificity but relate directly to particular work tasks performed in certain occupations. A review of the tasks included in the COPS-P revealed some overlap with the five job characteristic dimensions. Indeed, the measure may predict PJ fit with respect to an even more comprehensive set of job characteristics, because it may be mapped on to additional job characteristic dimensions beyond those used in this study. Thus, this or a similar measure of vocational interests may have applications for recruitment or job placement, to match individuals not only to vocations but also to jobs within organizations. Note that we do not deny the usefulness of personality with regard to these applications, but we do recommend further research on the relationship between vocational interests and PJ fit as well as other domains of fit such as person-organization and person-group fit.

Limitations

As with most research, some limitations should be considered when interpreting the results of this study. One is the use of a college student sample, which could constrain the generalizability of the results. However, most participants reported part-time job experience and almost half reported full-time work experience. In addition, the job characteristics used here were so general that even individuals with part-time jobs should be able to evaluate their fit with the characteristics. On a related note, the professional level of the occupations was appropriate for this sample, but the generalizability of our results to other samples merits testing.

Second, we focused solely on subjective fit; further research should investigate the hypotheses proposed here with regard to objective PV and PJ fit. In addition, this focus on subjective fit led to a reliance on self-report data because our hypotheses involved the extent to which individuals' perceptions of their PV fit and PJ fit could be predicted by their vocational interests and personality. Although similar studies have used self-reports, further research could incorporate multiple raters or multiple sittings to administer survey materials to better test the generalizability of our results.

Finally, vocational interests were measured in terms of the COPS-P dimensions, and personality was considered in terms of the Five-Factor Model. It is possible that other dimensions of personality or vocational interests would display different results from those found here or that other variables could contribute to perceptions of PV and PJ fit.

Implications

This study contributes to research on PE fit by including two levels of fit (i.e., PV and PJ fit) and considering the role of both personality and vocational interests in predicting these two types of fit. Considering different levels of PE fit simultaneously is important because these types of fit do not exist in a vacuum.

Individuals' degree of fit with respect to all levels of the environment is ultimately what determines their responses to a particular work environment. Therefore, it is important to understand the antecedents of fit as well as how these antecedents relate to the different levels of fit. The inclusion of two antecedents of fit is also useful in understanding the differential predictability of multiple types of individual differences on perceived fit.

Understanding how several individual difference domains relate to fit can help in achieving better matches between individuals and their working environments. Vocational counselors whose goal is to place individuals in favorable working environments should benefit from such knowledge because it allows them to guide individuals into favorable vocational and job environments in which they could be satisfied and successful. According to this study, vocational interests, in particular in terms of the COPS-P taxonomy, better predict perceived PV and PJ fit than the Five-Factor Model dimensions of personality. These findings support the long-standing practice of incorporating vocational interest measures in career counseling, but they are less encouraging with regard to the utility of the Five-Factor Model in this context. Nevertheless, based on other research that has revealed relationships between dimensions of the Five-Factor Model and career exploration strategies (e.g., Reed, Bruch, & Haase, 2004) and job search strategies (e.g., Tziner, Vered, & Ophir, 2004), we recommend further investigation of the Five-Factor Model with regard to vocational counseling.

Organizations that seek to attract and retain qualified individuals should also benefit from knowledge about the antecedents of PV and PJ fit because PE fit has been shown to lead to higher levels of attraction, satisfaction, organizational commitment, and performance and lower levels of turnover (e.g., Edwards, 1991; Kristof-Brown et al., 2005). Indeed, Lee, Johnston, and Dougherty (2000) provide a number of recommendations as to how the Five-Factor Model can serve as a basis for career development activities in organizations.

Conclusion

As a whole, this study represents a step toward understanding the role of vocational interests and personality in predicting PV and PJ fit, in particular in terms of the COPS-P vocational interest taxonomy and the Five-Factor Model of personality. More research is needed to advance the knowledge of individuals' perceived fit with their work environments, and we encourage such efforts in light of the theoretical and empirical evidence of the benefits of such fit.

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