

Person-Environment Fit and Its Implications for Personality Development: A Longitudinal Study

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ABSTRACT Continuity and change in Person-Environment Fit (PE Fit) and its relation to personality development was studied in a 4-year longitudinal study of college students ($N = 305$). PE Fit demonstrated moderate rank-order stability and small increases in mean-levels over time. Antecedents to PE Fit included gender (being male), high academic ability, low agreeableness, and low neuroticism. Outcomes associated with PE Fit included greater personality consistency and changes in personality in the direction of higher self-esteem and lower agreeableness and neuroticism. The implications of the findings for personality development are discussed.

Are individuals likely to flourish in an environment that fits with their values? Conversely, do difficulties and challenges arise when individuals are in an environment that conflicts with their goals and needs? The match between attributes of the person and attributes of the environment reflects the concept of person-environment (PE) fit

Acknowledgments: Preparation of this paper was supported by a grant from the Research Board at the University of Illinois and grants from the National Institute of Aging (R03 AG19414 & R01 AG21178) to the first author, and grants from the Office of Educational Research from the University of California at Berkeley, and the National Institute of Mental Health (MH-61829) to the second author.

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Journal of Personality 72:1, February 2004.
Blackwell Publishing 2004

(Caplan, 1987; Holland, 1997; Pervin, 1968; Walsh, Craik, & Price, 2000). Theoretically, PE Fit is a fulcrum concept that is assumed to influence a wide variety of psychological phenomena, ranging from satisfaction to personality consistency (Rounds, 1990; Roberts & DelVecchio, 2000).

Although compelling in its theoretical scope, there is little longitudinal research on PE Fit and, to our knowledge, no longitudinal research linking PE Fit to personality development. In the present paper, we examine continuity and change in PE Fit over a 4-year period and describe its antecedents and consequences for personality development. We used data from the Berkeley Longitudinal Study, an ongoing study of personality and self-esteem development that has followed a large sample of students through college (Robins & Beer, 2001; Robins, Fraley, Roberts, & Trzesniewski, 2001). The students provided descriptions of their ideal and actual university environment four times over the course of 4 years, in addition to measures of self-esteem and personality at the beginning and the end of 4 years. Three research questions were addressed in the current study: (1) How much continuity and change does PE Fit show over time? (2) What are the antecedents to PE Fit? (3) What is the link between PE Fit and personality development?

Conceptualization and Measurement of Person-Environment Fit

Person-environment fit has been studied from numerous theoretical perspectives (Schneider, Goldstein, & Smith, 1995), including PE Fit theory (Caplan, 1987; Conway, Vickers, & French, 1992; French, Rodgers, & Cobb, 1974), the Theory of Work Adjustment (Dawis & Lofquist, 1984; Lofquist & Dawis, 1991), and organizational theories that conceptualize person-environment fit as the correspondence between persons and characteristics of their jobs, vocations, or organizations (for a review, see Kristoff, 1996). Despite this diversity of perspectives, the various models of PE Fit converge on the critical features involved in conceptualizing and measuring fit. First, the person and environment must be considered jointly and measured using commensurate units. That is, in order to estimate PE Fit, the person's characteristics must be scaled in the same way as attributes of the environment. Second, there are two categories of person variables that match two categories of environmental

variables. The first person category—a person's values and needs—matches with the category of resources provided by the environment. The second person category—a person's abilities—matches with the category of the demands the environment places on the individual.

Third, the components of fit, the person and the environment, can be defined objectively or subjectively (Caplan, 1987; Pervin, 1968), with each providing unique information about fit. The objective person could be reflected in the aggregate judgments of peers or experts evaluating the other (Hofstee, 1994). The subjective person is captured in self-ratings of personal qualities or values. Similarly, the objective environment can be assessed through the concrete features of the environment or through the normative or consensual judgments of the environment, job, or organization. The latter is akin to Murray's (1938) concept of the alpha press, which reflects the objective environment. The subjective environment is reflected in self-report evaluations of the environment and is identical to Murray's (1938) concept of beta press.

In the present research, we focus on two forms of fit between a person's needs and the environment's resources: (a) the match between the subjective values and desires of the person and the consensus judgment of the resources provided by the environment (Alpha fit) and (b) the match between subjective values and desires of the person and subjective resources of the environment (Beta fit). Following from PE Fit theory, both the environment and the person's desires were conceptualized and measured using commensurate dimensions. Specifically, participants in the study ranked items describing their actual university environment (subjective resources provided by environment) and rank-ordered the same 10 items for their ideal university (subjective needs). The aggregate of the subjective environment rankings across all participants at each year of the study was used to derive the consensus judgment of the university, which may be considered a more objective evaluation of the resources provided by the university environment than any one person's opinion. Following from Murray (1938), the match between the consensus judgment of the environment and subjective needs is referred to as "Alpha Fit." The match between subjective resources of the environment as perceived by the person and subjective needs of the person is referred to as "Beta Fit."

Continuity and Change in Person-Environment Fit Over Time

How stable is an individual's fit with his or her environment? Does fit increase with time or does it remain unchanged? There is surprisingly little longitudinal data on PE Fit, so answers to these fundamental questions remain provisional. Chatman (1991) examined person-organization fit in a sample of accountants, and found a 1-year test-retest correlation of .62 and no mean-level change. Richards (1993) tracked PE Fit for research scientists over a 10-year period and found that PE Fit was moderately consistent once the scientists entered their occupations (r s ranged from .37 to .53 over 4- and 5-year periods). Based on these two studies, we would expect to find moderate levels of rank-order consistency in PE Fit over time.

Mean levels of PE Fit have never been tracked for more than 1 year. What might happen to mean levels of PE Fit over a 4-year period when tracked in the same sample experiencing the same environment? It is generally assumed that a person's values will change in the direction of the organization's values through the process of socialization (Chao, 1997; Chao, O'Leary-Kelly, Wolf, Klein, & Gardner, 1994; Chatman, 1989, 1991; Kristoff, 1996). With time, individuals respond to the role expectations and cultural press of their environment, and change in the direction of the organization's values. Based on this perspective, we would expect PE Fit to increase over the course of college.

It is also likely that there are individual differences in change in PE Fit, such that some individuals increase and some decrease in PE Fit over time. One relevant question is whether individuals change their values or change their perception of the environment in order to achieve greater fit. According to Lofquist and Dawis (1991), changes in PE Fit can arise either from reacting to the environment and changing one's values or through acting on the environment, the result of which would be a change in one's perception of the environment. For example, if the college environment is achievement oriented, then students may come to idealize achievement, thus leading to higher PE Fit. Alternatively, students may change majors in an effort to change the environment to be less achievement oriented, again leading to increases in PE Fit. The relevant question then becomes whether change is occurring in students' perceptions of the actual university environment or in their ideals for the

university, or both. We determine the locus of change in PE Fit by relating change in PE Fit to change in perceptions of the actual and ideal university.

Person-Environment Fit and Personality Development

When conceptualizing the possible links between PE Fit and personality development, it is important to distinguish between “socialization” effects and “selection” effects (Miech, Caspi, Moffitt, Entner-Wright, & Silva, 1999). Socialization effects refer to the effects that experiences like PE Fit have on personality development. Selection effects refer to the characteristics that people bring to the environment that may be responsible for the different levels of PE Fit and different levels of change in PE Fit over time. For example, certain individuals may be more likely to find a match with a given environment because of their personality. Therefore, it is prudent to test whether antecedent individual differences can explain different levels of PE Fit before one tests the socialization effects of PE Fit on individual differences in development.

In the present study, we first consider the individual difference factors that might predict PE Fit. Specifically, we examine whether PE Fit can be predicted from demographic variables such as gender and ethnicity, achievement variables such as high school GPA and achievement scores, and personality traits such as the Big-Five dimensions and self-esteem. Second, we consider the link between PE Fit and continuity and change in personality, a topic that has to date not been studied empirically. The conceptual link between PE Fit and personality development has been hypothesized in a variety of fields within psychology, but the link has received little empirical attention. For example, within developmental psychology, it has been argued that infants help to create their own environments through the influence of their temperament, essentially evoking an environment that fits with their unique characteristics (Bell & Chapman, 1986; Scarr, 1996; Scarr & McCartney, 1983). Developmental researchers have also argued that fit leads to greater psychological adjustment (Thomas & Chess, 1977) and possibly greater consistency in personality (Wachs, 1994). Similarly, Roberts and Caspi (2003) theorized that finding and developing an identity in adolescence and young adulthood that fits with one’s personality promotes personality continuity in adulthood.

Based on these theoretical assertions, if one achieves high PE Fit, the presumed consequence would be greater personality consistency. The underlying assumption is that when there is correspondence between individuals and their environments there are fewer environmental demands for personality change. For example, if the environment is competitive and the person is competitive (e.g., low agreeableness), the person would not be faced with pressure to change his or her competitive ways. Conversely, if a person is not competitive, but remains in an environment that is competitive, he or she would face a stronger environmental press toward competitiveness. In summary, a number of theoretical perspectives suggest that PE Fit plays a role in personality development and promotes greater continuity in personality. The present study provides the first empirical test of the longitudinal relationship of PE Fit and maintenance of personality consistency over time.

One additional possibility that remains untested is that PE Fit is related to change in personality traits over time. Chatman (1991) argued that fit was specific to each environment or organization, such that the qualities organizations find desirable in persons will be different across different organizations. Thus, to understand the effect PE Fit may have on personality change entails understanding the nature of the socialization process in each environment. Presumably, the characteristics of the environment press will correspond to the attributes that change in a person. For example, in Chatman's work, accounting firms desired people who were more confident and achievement oriented. Over time, belonging to this type of organization would press for people to become more confident and achievement oriented. Similarly, we might expect that the students in our sample will show changes during college that correspond to characteristics of the university environment. To test these ideas, we examined the association between PE Fit and changes in personality traits over the 4 years of the longitudinal study.

METHOD

Sample and Procedure

Sample participants were drawn from the Berkeley Longitudinal Study, an ongoing study designed to examine personality, achievement motivation, and self-concept development during college and early

adulthood. The initial sample included 508 undergraduate students who entered the University of California at Berkeley in 1992. Participants were contacted in class at the beginning of the first semester in their first year of college and offered partial course credit for completing surveys. Participants were surveyed once again in class at the end of the first semester. In subsequent assessments, participants were contacted by mail and asked to complete an extensive questionnaire in exchange for money (the incentive ranged from \$6 to \$20) at the end of their first, second, third, and fourth year in college. The original sample was diverse in terms of ethnicity (43% Asian, 36% Caucasian, 13% Chicano/Latino, 7% African American, 1% American Indian), sex (56% female), socio-economic status (20% came from families with 1992 household incomes below \$25,000 and 20% from families with household incomes above \$100,000), and academic ability (combined SAT scores ranged from 650 to 1540, $M = 1183$, $SD = 181$).

This study focuses on a subsample that provided information on PE Fit at the end of the first, second, third, and fourth years of participation. Growth estimates for PE Fit could be made for a total of 305 students, and this constitutes the primary sample on which data analyses were conducted. To test for attrition effects, we compared the participants in this more restricted sample to the individuals from the original sample who did not participate. We found that participants scored higher on measures of high school GPA, combined SAT verbal and math scores, and Conscientiousness (all $p < .05$). Participants did not differ from nonparticipants in gender, ethnic identity, Extraversion, Agreeableness, Neuroticism, or Openness to Experience. For several analyses (e.g., rank-order correlations over time), the sample size was smaller than 305.¹ We also ran attrition analyses for the subsample with the smallest sample size. The findings were identical except that participants in the smallest sample also scored higher than nonparticipants on Agreeableness and were more likely to be female.

Measures

Person-environment fit. In the present research, we focused on two forms of fit between a person's values and the environment's resources: (a) the match between subjective values of the person and consensus

1. The discrepancy between the growth estimate sample size and the rank-order consistency sample size results from the fact that growth methods use all information over time in order to estimate change, whereas typical univariate approaches to estimating change and consistency are bound by the sample size in any given wave of assessment or the sample size that results from combining any two waves of assessment.

judgment of the resources provided by the environment and (b) the match between subjective values of the person and subjective resources of the environment. We assessed PE Fit by having students rank the degree to which 10 values described their actual and ideal university environment. The 10 values were taken directly from summaries of the major dimensions found in the most comprehensive environmental assessment systems employed in PE Fit research (e.g., Holland, 1997; Moos, 1987; O'Reilly et al., 1991). Examples include "A school that emphasizes innovation and creativity," "A school that provides a supportive environment," and "A stimulating and exciting place." Participants first ranked these values from 1 (*Most descriptive*) to 10 (*Least descriptive*) according to how descriptive they were of the university environment ("I find UC Berkeley to be..."). Then, they ranked the same 10 items according to their ideal university environment ("My ideal university would be..."). Participants were instructed not to assign the same rank to more than one statement.

The aggregate of the subjective environment rankings across all participants at each year of the study was used to derive a consensus evaluation of the resources provided by the university environment. Following from Murray (1938), the match between the consensus judgment of the environment and subjective needs is referred to as "Alpha Fit." The match between subjective environment and subjective needs is referred to as "Beta Fit." Spearman rank-order correlations between ideal rankings of the university environment and the aggregate of the subjective rankings of the environment were used to estimate Alpha Fit.² Spearman rank-order correlations between each person's ideal rankings of the university and subjective rankings of the actual university environment were used to estimate Beta Fit. High positive scores indicated greater fit; low negative scores indicated less fit. These measures were available at four points in time (the end of Years 1 through 4).

Academic ability. High school academic achievement was measured using standardized test scores (combined SAT-Verbal, SAT-Math) and high school GPA, which were obtained from university records.

2. An argument could be made that the inclusion of each person's assessment of the actual environment in the consensus aggregate of the actual environment biases the resulting correlation toward the person's own ranking. We held out each person's ranking of the actual environment from the consensus profile and recomputed the profile correlations. The Alpha Fit estimates holding out the person's own rankings of the actual environment correlated .99 and above with the Alpha Fit estimates that included the person's own rankings of the actual environment in the estimate of the consensus profile.

Rosenberg self-esteem. Participants completed the 10-item Rosenberg Self-esteem scale (RSE; Rosenberg, 1965). Items were rated on a 1 (not very true of me) to 5 (very true of me) scale. The RSE was administered in all 6 assessments (alpha reliabilities ranged from .88 to .90). Growth modeling was used to examine change in self-esteem during college. Positive slopes indicate increases in self-esteem and negative slopes indicate decreases in self-esteem. The y -intercept represents the participant's mean self-esteem level across the 4-year period. The slope and the y -intercept correlated .38 ($p < .05$).

Personality. The Big-Five personality dimensions were assessed using the 60-item NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, 1992). The NEO-FFI was administered during the 1st week of college and at the end of the 4th year; alpha reliabilities were .83 and .82 for Extraversion, .76 and .77 for Agreeableness, .81 and .83 for Conscientiousness, .84 and .85 for Neuroticism, and .77 and .75 for Openness to Experience, respectively for the two assessments. Items were rated on a 5-point scale ranging from 1 (*not very true of me*) to 5 (*very true of me*).

We used an index based on Christensen and Mendoza's (1986) Reliable Change Index (RCI; see also Jacobson, Roberts, Berns, & McGlinchey, 1999) to estimate individual differences in consistency in personality traits over time. The RCI quantifies the probability of observing a difference score equal to or greater than the one observed, assuming that no change has occurred. The RCI explicitly accounts for the unreliability of measurement, thereby providing a useful method for separating true personality change from change due to measurement error (Jacobson & Truax, 1991). We classified an individual as having changed on each of the Big-Five personality traits if the probability associated with his or her RCI score was less than 5% (i.e., we used a 95% confidence interval). We then created an overall index by summing the RCI indices across the Big Five. As the number of students demonstrating reliable change on 4 or 5 scales was so low, we collapsed the RCI index into a 4-point scale from 0 (*no reliable change*) to 3 (*reliable change on 3 or more Big-Five scales*).

Analytical Issues

The measures of PE Fit and self-esteem were assessed multiple times over the duration of the longitudinal study. The availability of multiple waves of data allowed us to take advantage of growth modeling techniques (Roberts & Chapman, 2000; Willett, 1988). By modeling individual trajectories over multiple waves of data, growth modeling provides a more reliable index of change than difference or residual change scores and is less confounded by regression to the mean. Growth modeling also

helps deal with missing data because trajectories are computed using all available data for each participant (e.g., if an individual participated in three of the four assessments of PE Fit, then a growth curve would be computed based on those three time points).

To compute growth estimates for each participant, we regressed scores on assessment period (centered at the midpoint of the time period). Positive slopes (i.e., standardized beta weights) indicate increases, and negative slopes indicate decreases. The intercept, centered at the midpoint of the longitudinal period, provides an estimate of the overall average of each variable over the longitudinal period. Thus, we used growth modeling to generate average estimates (the intercept) and growth estimates (the standardized slopes) for Alpha Fit, Beta Fit, and Self-esteem).

RESULTS

Continuity and Change in PE Fit Over Time

We first tested whether individual differences in PE Fit were consistent over time. Table 1 shows the correlations of Alpha and Beta Fit over time. Both forms of PE Fit showed modest consistency across time with year-to-year correlations ranging from .35 to .52. These levels of consistency are lower than that found for personality traits which average .5 to .6 in the same age period (Roberts &

Table 1
Correlations of Alpha and Beta Fit Over Time

	<i>Alpha Fit</i>				<i>Beta Fit</i>		
	Y1	Y2	Y3	Y4	Y1	Y2	Y3
Year 1 Alpha Fit	—						
Year 2 Alpha Fit	.35*	—					
Year 3 Alpha Fit	.38*	.41*	—				
Year 4 Alpha Fit	.26*	.39*	.36*	—			
Year 1 Beta Fit	.47*	.22*	.25*	.29*	—		
Year 2 Beta Fit	.18*	.41*	.25*	.36*	.48*	—	
Year 3 Beta Fit	.21*	.19*	.46*	.32*	.42*	.46*	—
Year 4 Beta Fit	.11	.23*	.23*	.54*	.49*	.47*	.52*

Note. *N*s range from 157 to 285.

* $p < .05$.

DelVecchio, 2000; Robins et al., 2001) or self-esteem, which averages .55 in the same age period (Trzesniewski, Donnellan, & Robins, 2003).

We next tested whether PE Fit showed mean-level changes over time. According to socialization theories, PE Fit should increase with time spent in the environment. Using growth modeling, we estimated average growth rates for Alpha and Beta Fit to determine whether PE Fit increased with time. Only Alpha Fit showed a positive rate of change ($Z = 1.87, p < .05$). This rate of change corresponded to an effect size of approximately one-quarter of a standard deviation increase over the 4-year period. Beta Fit did not significantly increase or decrease over the 4 years of the study ($Z = .45$).

The next question we addressed was whether individual differences in change in PE Fit reflect changes in the students' perceptions of the actual or the ideal environment. To test this question, we computed growth trajectories at the item level for the actual and ideal environment rankings and then correlated these item level trajectories with the overall PE Fit trajectories. If changes in PE Fit were related more to changes in the ideal rankings, it would imply that students changed their own values in order to enhance their fit with the environment. Conversely, if changes in PE Fit were related more to changes in the actual environment, this would imply that students changed their environment to find greater fit. The results revealed distinctly different paths through which individual differences in change in Alpha and Beta Fit came about (see Table 2). Students who increased in Alpha Fit did so through changing their rankings of the ideal environment in the direction of the consensual rankings of the university environment. For example, growth in Alpha Fit was related to idealizing a more competitive ($r = .33, p < .05$), achievement-oriented environment ($r = .35, p < .05$) and deemphasizing the desire to be in a supportive ($r = -.48, p < .05$) and cooperative environment ($r = -.41, p < .05$). There was only one significant correlation with changes in the actual environment, and that was seeing the environment as less competitive ($r = -.17, p < .05$). This indicates that changes in Alpha Fit came about through students changing their own values, not their environment.

In contrast, growth in Beta Fit arose from changes in students' perceptions of the actual and ideal environment. Growth in Beta Fit

Table 2
Correlations Between Change in PE Fit and Change in Evaluation
of the Actual and Ideal University at the Item Level

	Growth in <i>Alpha Fit</i>		Growth in <i>Beta Fit</i>	
	Actual	Ideal	Actual	Ideal
A school that emphasizes high achievement	.03	.35*	.01	.22*
An intellectual place	.11	.33*	.13*	.17*
A school that fosters competition among students	-.17*	.33*	-.31*	.17*
A stimulating and exciting place	-.03	-.13*	.14*	.00
A school that emphasizes innovation and creativity	-.03	-.06	.26*	.02
A fair and tolerant place	-.01	-.17*	.14*	-.02
An organized and structured school	-.04	-.25*	-.05	-.06
A school that emphasizes following rules and regulations	-.02	-.37*	-.29*	-.10
A cooperative and people-oriented organization	-.06	-.41*	.14*	-.18*
A school that provides a supportive environment	-.11	-.48*	.09	-.24*

Note. *Ns* range from 269 to 285. Ranks were reversed so that growth was reflected in higher scores over time. A positive correlation indicates that increases in fit were associated with increases in either the ideal ranking or actual ranking of the items listed on the left.

* $p < .05$.

was associated with changes in the actual environment that reflected coming to see the university as less competitive ($r = .31, p < .05$) and rule oriented ($r = .29, p < .05$) than originally thought and as more innovative ($r = -.26, p < .05$) and people oriented ($r = -.14, p < .05$). The correlations between growth in Beta Fit and growth in perceptions of the ideal environment mirrored the findings for growth in Alpha Fit but at a lower magnitude (see Table 3). Thus, people who increased in Beta Fit did so in part from idealizing a more competitive and achievement-oriented university and by coming to see the actual university as less competitive than originally thought. This pattern implies that students achieved higher Beta Fit

Table 3
Antecedents to PE Fit

Antecedent	Average Alpha Fit	Average Beta Fit
Gender	-.13*	-.01
High School GPA	.12*	.07
SAT Verbal & Math	.16*	.10
<i>Personality</i>		
Self-esteem	.05	.06
Extraversion	.00	.12
Agreeableness	-.19*	.02
Conscientiousness	.08	.12*
Neuroticism	-.16*	-.10
Openness	.00	-.04

Note. *Ns* range from 293 to 305. Variables described as “Average” reflect average scores over the four years of the longitudinal study (i.e., the intercept of the growth curve centered at the midpoint of the time period).

* $p < .05$.

by changing both their own values and the nature of their school environment over time.

PE Fit and Personality Development

To examine what kind of person fit with the university environment, we correlated antecedent demographic, ability, and personality variables with average levels of PE Fit (see Table 3). Average levels of Alpha Fit were associated with being male ($r = .13$, $p < .05$), higher high school GPA ($r = .12$, $p < .05$), higher SAT scores ($r = .16$, $p < .05$), and lower Agreeableness ($r = -.19$, $p < .05$) and Neuroticism scores ($r = -.16$, $p < .05$). We found only one predictor of Beta Fit. Conscientiousness was associated with higher average levels of Beta Fit during college ($r = .12$, $p < .05$). There were no ethnic differences in average levels of either Alpha or Beta PE Fit.

To test whether PE Fit was related to greater personality consistency, we correlated average levels of Alpha and Beta Fit with the aggregate Reliable Change Index. Given the base rate of reliable change (see Robins, Fraley, et al., 2001), the overall RCI index captures movement on one or two traits over the 4-year

period. Average Alpha and Beta Fit were both negatively correlated with the Reliable Change Index ($r = -.13$ and $-.18$, $p < .05$, respectively), indicating that students who had higher levels of PE Fit showed higher levels of personality consistency over 4 years of college.

To test whether PE Fit was related to personality change, we related the PE Fit indices to personality scores at Year 4, controlling for personality standing at Year 1. We also controlled for the background factors that predicted PE Fit, such as GPA and SAT scores (see Table 3). Analyses showed that increase in Beta Fit was positively correlated with increases in self-esteem ($r = .13$, $p < .05$). Given that Agreeableness and Neuroticism predicted levels of Alpha Fit, we hypothesized that PE Fit would be related to change in these two variables reflecting a corresponsive relationship. The correlates of change in the Big Five with PE Fit showed that higher average levels of Alpha Fit were associated with decreases in Agreeableness over time ($r = -.15$, $p < .05$). Growth in Alpha Fit was also correlated with decreases in Neuroticism over time ($r = -.14$, $p < .05$). In the case of Agreeableness and Neuroticism, it appears that individuals who were less agreeable and emotionally stable tended to fit better with the university environment and, in turn, individuals who fit with the environment or grew in Alpha Fit tended to become less agreeable and more emotionally stable with time. Neither average levels of Beta Fit nor Growth in Beta Fit were related to changes in the Big Five.

DISCUSSION

Person-environment fit has rarely been examined longitudinally, nor has it been related systematically to personality development. In the present study, PE Fit was tracked over a 4-year period and related to continuity and change in personality. PE Fit showed modest levels of consistency and little mean-level change. Analyses of the antecedents of PE Fit showed that individuals who achieved more in high school and who were less agreeable and neurotic than their counterparts achieved higher levels of PE Fit in college. Subsequently, PE Fit was related to higher levels of personality consistency, increases in self-esteem, and decreases in agreeableness and neuroticism.

The Development of PE Fit Over Time

The level of continuity and change that a given construct demonstrates is important for understanding whether the construct is trait-like or not (Trzesniewski et al., 2003). If PE Fit demonstrated very high rank-order consistency and little change over time, then it would be a mistake to treat PE Fit as if it were a dynamic construct that could show dramatic changes with time and socialization practices. Conversely, if PE Fit demonstrated little consistency over time, then it might better be conceptualized as a transient state that is more episodic in nature. We found that both indicators of PE Fit showed moderate levels of rank-order consistency. These levels of consistency were lower than rank-order consistencies found for constructs such as personality and self-esteem over similar periods of time (Roberts & DelVecchio, 2000; Robins, Fraley et al., 2001; Trzesniewski et al., 2003). Thus, it would appear that the correspondence between students' perceptions of the environment and their values about the ideal environment fluctuate more like state-like than trait-like constructs. The implication of this finding is that students clearly revise their estimates of the nature of their school environment more often than they revise their perceptions of their personalities.

Consistent with predictions from socialization models, Alpha Fit increased over time, though the magnitude of the increase was small. Beta Fit, in contrast, demonstrated little mean-level change over the 4 years of our longitudinal study. These results contradict the perspective that experiences within an environment necessarily lead to socialization and dramatic shifts in values toward the environment. Rather, it seems that if normative change occurs at all, the magnitude of the change is slight. Furthermore, the modest levels of rank-order consistency suggest that there was a wide variety of individual differences in change in PE Fit over time. That is, some students did respond to the socialization pressures and increased in PE Fit, whereas other students did not.

A relevant theoretical question is whether the changes at the individual level of PE Fit arise from students revising their perceptions of the environment or revising their values. This question does not address the overall patterns of mean-level change. Rather, it addresses why particular individuals might increase or decrease in Alpha and Beta Fit over time. The answer to this

question depended on the type of fit examined. For Alpha Fit, growth in the direction of the objective environment was almost entirely the result of revising one's own values and not from changing one's perception of the university. The pattern for Alpha Fit supports a straightforward socialization interpretation in which we assume that values are imparted to the individual by a relatively uniform and unchanging environmental press.

In contrast, growth in the more subjective Beta Fit index was related to both changes in perceptions of the environment and changes in one's own needs and values. The mixed pattern associated with changes in Beta Fit reflects a more complex phenomenon. For example, in addition to capitulating to the environment, students may have taken an active role in redefining their relationship with the university by joining social groups or changing majors, which may have resulted in a change in their perception of the university itself. Of course, these ideas are speculative and should be tested in future research.

PE Fit and Personality Development

Understanding the role of PE Fit in personality development requires considering the selection and socialization effects of PE Fit. Chatman (1989, 1991) argued that the characteristics that predispose a person to fit in any given environment or organization are those characteristics most valued by the environment or organization. The predictive correlates of average PE Fit were entirely consistent with this perspective. The aggregate ranking of the actual university environment described an environment that pulled for someone who was intelligent (emphasizes high achievement), less agreeable (fosters competition), and emotionally stable (the lowest ranked item was "provides a supportive environment). Consistent with this profile, we found that smart, less agreeable, emotionally stable, male students fit better into this highly competitive, unsupportive, and achievement-oriented environment. Consistent with Chatman's argument, we do not believe that this pattern of predictors is generalizable to any environment. Rather, the profile of characteristics that predict fit within any organization or institution is specific to that environment. What can be extrapolated from these results is that there will be certain individuals predisposed to thrive in a given context.

We also proposed that PE Fit would affect the consistency of personality. Both Alpha and Beta Fit were negatively associated with the RCI index of personality consistency, indicating that students who fit better with the university environment demonstrated less personality change overall. We also tested whether PE Fit was related to directional changes in personality from the beginning to the end of college. We found several interesting findings. Growth in Beta Fit was positively associated with increases in self-esteem, indicating that increases in subjective fit were associated with increases in positive self-regard. Furthermore, average levels of Alpha Fit were associated with decreasing Agreeableness, and increase in Alpha Fit was associated with decreases in Neuroticism. Thus, the press of the consensual environment, which was oriented toward competitive intellectualism, was associated with personality changes that mirrored the environmental press. The findings support the notion that there is a corresponsive relation between personality traits and Alpha Fit in this context (Roberts, Caspi, & Moffitt, 2003). Less agreeable, emotionally stable students fit better with the environment and, in turn, fit with the environment was associated with lowered agreeableness and increased emotional stability.

Limitations, Future Directions, and Conclusions

To our knowledge, this longitudinal study is the first to report comprehensive information on continuity and change in PE Fit over time and the first to link PE Fit to personality development. The results generally supported theoretical conceptions of the antecedents and consequences of PE Fit. In addition, the findings support the conclusion that PE Fit is a component of personality development. Nonetheless, the study has several limitations that should be considered when evaluating its generalizability.

First, we studied only one cohort in one environmental context during a specific time in history, and the findings therefore require replication. We do not doubt, for example, that the predictive correlates of PE Fit will change from context to context. Second, the students who continued to participate in the study were more conscientious and distinguished by higher achievement in high school. In some cases, the effect of attrition may have resulted in the attenuation of some correlations, as the range of the sample was

somewhat restricted. Alternatively, because the sample was more academically oriented, they may have been more likely to become less agreeable and more emotionally stable with time. Third, as is often the case in nonexperimental longitudinal research, it is difficult to determine the causal direction of the correlational relationships. This causality conundrum is impossible to solve, even with a prospective longitudinal design, and the research questions addressed in the present study cannot be readily examined using experimental designs. Fourth, we asked individuals to rank-order the characteristics of their ideal and actual school environment. Alternatively, we could have used ratings, which in some cases have more desirable psychometric qualities. Finally, we were unable to track some of the experiences that might facilitate change in PE Fit, such as changes in major and peer groups. Future research should track these contextual factors to test whether they have a significant impact on PE Fit.

We believe that our study establishes PE Fit as a viable construct for research in personality development, and we hope that our findings will inspire further longitudinal research that extends and improves upon our design. For example, future research should expand the conceptualization of PE Fit beyond the two forms that we tested in the present study to include more objective assessments of the person's needs and characteristics. Including this information will fully test the conceptualization of PE Fit as set down in theoretical models (Caplan, 1987). Furthermore, future research should assess PE Fit in multiple contexts of a person's life, such as at work and in relationships, to approximate better the notion of a personal niche. A multidimensional, multicontext conceptualization of PE Fit may have a much more powerful impact on personality development over time.

In conclusion, the present study demonstrated that (a) PE Fit shows moderate levels of rank-order consistency and little mean-level change over time, (b) one form of PE Fit, the match between ideals and the objective environment, can be predicted from background differences in gender, achievement, and personality traits, and (c) PE Fit was related to both personality consistency and personality change. To our knowledge, PE Fit is one of the few conceptualizations of a person's relationship to the environment that encompasses such a broad range of relationships. Thus, the findings point to the need for further research on the antecedents and consequences of this important psychological construct.

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