
Personality and Personal Projects: Linking Big Five and PAC Units of Analysis

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ABSTRACT This article examines the relationships between classical trait units as represented by the five-factor model (e.g., Digman, 1990) and personal action construct (PAC) units as measured by Personal Projects Analysis (Little, 1983). One hundred and forty-seven students were administered the NEO Personality Inventory (Costa & McCrae, 1985) and two components of Personal Projects methodology during their first term in university. Neuroticism and Conscientiousness were related to problematic and positive project systems, respectively, with these effects generalizing across the academic and interpersonal project domains. Extraversion and Agreeableness were also associated with positive evaluations of personal projects, particularly in the interpersonal domain. Openness was distinctively linked with project initiation and value congruency. We suggest theoretical and applied implications of using PAC methods to expand and refine the classical trait research agenda.

The research in this article focuses on the interrelationships between two different types of conceptual unit in personality research: traits, as represented by the five-factor model (e.g., Costa & McCrae, 1985) and personal action construct (PAC) units as represented by Personal Projects Analysis (Little, 1983).

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Trait concepts have been explored by personality researchers for decades and evidence has steadily mounted that five core factors underlie the diverse set of dimensions that have been created to study personality (Costa & McCrae, 1988; Digman, 1990; Digman & Inouye, 1986; Fiske, 1949; Goldberg, 1990; Hogan, 1983; John, 1989; John, Goldberg, & Angleitner, 1984; McCrae, 1989; McCrae & Costa, 1985, 1987; Norman, 1963; Tupes & Christal, 1961). While different names have been suggested for these "Big Five" dimensions we shall follow Costa and McCrae's (1985) usage in labeling them Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. Recent reviews have provided evidence that these five independent dimensions are recoverable from data involving self-report, peer ratings, Q-sorts, and adjective checklists in English as well as several other languages (Costa & McCrae, 1985; Digman, 1990).

PAC units have emerged recently as alternatives to trait analysis in personality research (Little, 1989). These units can be regarded as middle level analytic constructs in contrast with more superordinate molar constructs, such as overarching values or life-styles, and more subordinate or molecular constructs, such as behavioral acts (Buss & Cantor, 1989; Little, 1983, 1987a). PAC units emphasize the assessment of intentional action in context and include current concerns (Klinger, 1977, 1987, 1989), personal projects (Little, 1983, 1989), life tasks (Cantor, 1990; Cantor, Norem, Niedenthal, Langston, & Brower, 1987), and personal strivings (Emmons, 1986, 1989a), among others (see recent reviews by Buss & Cantor, 1989; Cantor & Zirkel, 1990; Emmons, 1989b). While the present study will focus upon personal projects as PAC units, the broader spectrum of related constructs will also be drawn on where appropriate.

Personal projects are extended sets of personally relevant action. They can range from the mundane acts of a Monday afternoon to the galvanizing commitments of a lifetime. Though they may encompass the full spectrum of human concerns and pursuits, personal projects most frequently embody the middle level muddlings through which we negotiate our daily lives (Little, 1989). We assume that the content, appraisal, impact, and dynamics of personal projects play a pivotal role in human transactions and can serve as a constructive framework for personality research (Little, 1987a, 1987b, 1987c, 1988, 1989).

Our research program on personal projects is based upon a social ecological perspective on personality (Little, 1972, 1976; Little & Ryan, 1979). We assume that biological, cultural, social, environmental, and

personal-intentional systems of influence converge on the organism whose overarching survival project is the implementation, reconciliation, and integration of the demands of these competing systems of influence. Personal projects, under this model, serve as one way of meeting the adaptational demands imposed upon us by our membership in diverse and competing ecologies (Little & Ryan, 1979). For example, biological pressures will require the frequent launching of "get food" projects, which, depending upon our cultural, environmental, and social constraints and resources may eventuate in personal projects ranging from "find water for my baby" to "get more truffles for Monique's party." Thus, by their very nature, personal projects provide a lens through which to examine not only individuals but their enveloping contexts (Little, 1987a).

Personal projects are closely linked to other PAC units currently being explored by personality researchers. Projects are framed within and often engendered by the individual's immediate and historical contexts. In this respect they serve as the personalized instantiations of the life tasks mandated by a normative and age-graded culture (e.g., "doing well at school," "raising my children") (Cantor, 1990; Cantor & Zirkel, 1990). Personal projects also reflect the more enduring and internalized aspects of personality. The generative roots of these influences may extend into our evolutionary past (Buss & Cantor, 1989; Hogan, 1983; Kenrick, 1989), and their daily manifestations may take the form of current concerns (Klinger, 1977, 1987) or personal strivings (Emmons, 1986, 1989b).

The major goal of this article is to examine the linkages between the Big Five traits and indices derived from individuals' appraisals of their personal projects. To set the stage for our empirical study, we shall begin with a brief introduction to the methodological details of Personal Projects Analysis. This is followed by consideration of the explanatory status of Big Five and PAC units of analysis, and some speculations about the substantive links we might anticipate between the classical and emerging units of analysis in the study of personality.

Personal Projects Analysis Methodology

Personal Projects Analysis consists of several interrelated modules, two of which will concern us in the present article (see Little, 1987b, 1987c, 1989, for more details). The initial phase is a direct manifestation of the credulous approach which derives from our Kellian roots (Kelly, 1955;

Little, 1972). Here we ask our subjects directly to tell us “what they are up to” by listing the personal projects in which they are currently engaged (Little, 1983). This Project Elicitation List typically generates approximately 15 personal projects expressed in the idiosyncratic language of the respondents, such as “get over my fight with Dad,” “lose 20 pounds,” and “study for my stats exam.”

Respondents are then asked to rate 10 of these personal projects from 0 to 10 on dimensions chosen on the basis of their theoretical and applied importance (Little, 1987a, 1989; Palys & Little, 1983). In the present study 17 dimensions are used which align themselves into five major themes: project meaning (e.g., enjoyment), structure (e.g., perceived control), community (e.g., visibility to others), efficacy (e.g., progress to date), and stress (e.g., difficulty).

It is possible to score personal project protocols ipsatively by correlating rating dimensions across the 10 projects for each individual and/or normatively by summing ratings across projects for each dimension and calculating mean dimension scores for each individual, which can then be correlated with other individual differences variables such as demographic or personality variables (e.g., Little, 1989; Omodei & Wearing, 1990; Ruehlman & Wolchik, 1988). The latter strategy was adopted in the present study where personal project dimension rating scores are correlated with trait dimensions as assessed by the NEO Personality Inventory (NEO-PI; Costa & McCrae, 1985). We also report these correlations separately for two categories of personal projects drawn from a more comprehensive taxonomy (Little, 1983): academic and interpersonal projects. These two domains have figured importantly in the work of Cantor and her colleagues (e.g., Cantor, 1990) and are particularly salient to the subjects in our research who are being studied as they negotiate the transition from high school to the end of the first term of college.

Linking Five-Factor and Personal Projects Variables

Trait and PAC units as explanatory constructs

In some respects trait and PAC units represent potentially conflicting, alternative modes of construing human action (e.g., Buss & Craik, 1986; Little, 1987a). For example, the act of leaving an examination early may be construed under a trait model as a prototypic exemplification of the trait of impulsiveness. Under a PAC interpretation it

may be seen as the embodiment of the personal project “get home in time for the kids,” or the relative prepotency of the striving “to be a good parent” over that of “being a first-class student.” In this example an explanation based on PAC units is suggested as an override to a trait account. Trait psychologists can always challenge this by invoking other, independent manifestations of impulsiveness, arguing for the plausibility of a trait account when there is reason to doubt the validity or veracity of personal accounts of intentional action. Whether there is a clear a priori epistemic resolution of these contrasting views is moot. There are many situations in which these potentially conflicting accounts can have important consequences for human welfare (e.g., legal disputes about quality of parenting, academic appeals, committee hearings, etc.), and the alternative merits of trait and personal action accounts deserve to be given serious attention.

Thus, from one viewpoint, traits and personal actions can be seen as explanatory adversaries. From other perspectives, however, they represent different levels of analysis, both of which are necessary for a comprehensive, integrated theory of personality (Little, 1972, 1976, 1987b; Magnusson, 1990; Wakefield, 1989). It is in this spirit that the present study has been conceived. We see the establishment of empirical linkages between traits and personal actions as a contribution to the integrative function that is central to the field of personality psychology. We assume further that there is an important, perhaps unique, role to be played by PAC methods in expanding and clarifying the validation program of the five-factor model of traits. While it is important to examine issues relating to the commensurability and explanatory primacy of these different units of analysis, such analyses fall outside the scope of the present research (see Buss & Craik, 1983; Emmons, 1989b; Little, 1987a).

Using PAC methods to expand trait validation programs

The methodological strategies used in the extensive validation programs with trait units have covered a considerable range of options, including experimentally manipulated variables, self-reports, reports by expert and nonexpert judges, life event data, and so on. PAC units, and in the present instance Personal Projects Analysis, offer a rather distinctive vantage point for the assessment of constructs relevant to the validation of trait concepts.

Costa and McCrae (1989b) and Caspi (1987) have reported impres-

sive evidence for the ability of trait measures, often assessed very early in life, to predict important outcome criteria such as marital instability, promotion in employment and military contexts, and criminal records. While these long-term distal measures offer evidence for the practical utility of trait measures and for the long-term directive effect of traits on socially important outcomes, trait psychologists have raised the need for studies of the proximal paths or routes through which the more distal accomplishments are achieved.

For example, in discussing the five-factor model and its applicability to research on aging, Costa and McCrae (1989b) suggest that our understanding of the life course can be enriched by a more fine-grained or molecular analysis of the personal projects that individuals are pursuing in the process of adapting to their changing environments. In the Allportian terms recently reintroduced by Cantor (1990), the call for examination of the relationships between the five-factor trait model of personality and the content and evaluation of everyday personal projects is a call for the exploration of linkages between the "havings" and the "doings" of human personality. In Personal Projects Analysis we emphasize the middle level doings that may culminate in the major deeds of human lives captured by orthodox criterion measures.

Besides serving to explicate the routes through which more conventional criterion measures might be accomplished, our social ecological model emphasizes that personal projects, in themselves, constitute valued and important outcomes worthy of appraisal. A similar case was presented by Sommer (1973) in arguing that remote, distal outcome measures in program evaluation ought to be supplemented with, if not actually supplanted by, measures of the day-to-day positive effect a particular program has upon its participants.

In Personal Projects Analysis we have focused on five major themes, mentioned above, which can serve as markers of effective daily functioning. We assume that it is essential to human well-being and adaptation that individuals achieve some sense of meaning, structure, and community in their lives, and that they approach their daily pursuits with a sense of efficacy and without undue stress (Little, 1987a, 1987b). We also anticipate, however, that there will be multiple, alternative routes through which these five overarching project themes can be accomplished and that both their collective achievement and the specific routes through which each is accomplished will be intimately linked to individual differences in personality.

Possible influences of traits on personal projects

Traits are likely to influence both the ease with which personal projects can be accomplished and the alternative routes through which they are carried out. In an article introducing personal projects methodology, a model was proposed in which personal projects were seen as progressing through inception, planning, action, and termination stages, with individual differences in personality playing a key role at each of these stages (Little, 1983). For present purposes, though, we wish to take a rather different tack, one suggested by McCrae and Costa (1989) in their examination of three different effects that traits might have on an individual's sense of well-being. They propose that traits can influence well-being by temperamental, experiential, and instrumental links. The same influences, we suggest, play important roles in linking traits with the personal projects through which adaptational effectiveness and a sense of well-being can be accomplished.

First, a temperamental effect can come into play when physiologically based affective dispositions directly influence a person's sense of well-being. The clearest example of this is Neuroticism, which has been posited as being rooted in generalized negative affectivity (Watson & Clark, 1984). Based on this assumption and on exploratory research (Little, 1989), we anticipate that Neuroticism scores will be inversely associated with the "positive" project dimensions underlying meaning, structure, community, and efficacy and directly associated with project stress.

More speculatively, it has been suggested that Extraversion may be interpreted as generalized positive affectivity (Watson & Clark, in press). If this assumption is tenable, Extraversion ought to show a pattern of association with project variables that is opposite to that of Neuroticism (i.e., Extraversion should be positively correlated with project meaning, structure, community, and efficacy and negatively correlated with stress).

If the temperamental and generalized affectivity assumptions are tenable, both Neuroticism and Extraversion are expected to be more strongly linked with project dimensions which are particularly affect-laden, such as enjoyment and stress, in contrast with some of the "cooler" project dimensions such as initiation or time adequacy (Little, 1988).

The second way traits may influence personal projects has been termed an "experiential effect." Openness, for example, does not seem

to embody a particular affective orientation toward life or the events and actions encompassed in life experiences, but involves a disposition to explore deeply and feel sharply a diversity of life experiences—irrespective of their valence—and to actively seek out such experiences. In the case of personal projects, then, we might expect Openness to be associated with dimensions of project meaning, and with those reflecting a more exploratory approach to daily living (e.g., project initiation). Conscientiousness, similarly, has been found in previous research to be strongly linked with feelings of efficacy vis-à-vis one's personal projects (Little, 1989), and we anticipate replicating that finding in the present study.

The third way traits can affect personality, as posited by McCrae and Costa, is via their instrumental influence on well-being, and by inference, on personal projects systems. A trait such as Extraversion will influence an individual to seek out contexts, situations, or projects (e.g., "party on the weekend") that are likely to sustain and enhance the trait in question (Argyle, Martin, & Crossland, 1989; Buss, 1987; Caspi, 1987). The more remote outcomes often used in personality trait validation programs, such as marital instability, may not readily facilitate direct "niche-picking" by individuals differing in personality. The more proximal acts leading up to this outcome, such as mate selection, allow greater leverage to be exerted by traits (Buss, 1989). Similarly, personal projects can serve as vehicles for transforming dispositional needs and orientations into palpable action (Cantor & Zirkel, 1990; Little, 1989; Omodei & Wearing, 1990). There may be considerable drift between the trait of high Agreeableness in George and the remote criterion of a long and happy marriage. His marriage may fail for any number of reasons, many beyond his control, and the scorecard for trait models may dip a bit. But the personal project "sustain my mate through rough times" and its appraisal by George as extremely important and absorbing may capture the kind and gentle Georgian proclivities with greater fidelity than that afforded by orthodox units.

Domain and dimensional specificity versus generality

Whereas temperamental effects might be assumed to operate across different projects or action domains, experiential and, particularly, instrumental linkages are more likely to show some degree of domain specificity. For example, McCrae and Costa (1989) have argued that Conscientiousness and Agreeableness exhibit domain specificity in their

influence on well-being, the former having particular saliency for the world of work and the latter to the domain of love and interpersonal attachment. In the present study, then, we might anticipate that Conscientiousness would relate significantly to the "positive" project dimensions in academic projects, while Agreeableness would have similar links with interpersonal projects.

It is likely that all three of these sources of trait influence will affect the personal projects of individuals but that the patterning of this influence will depend on the particular trait scales and project dimensions being considered. It is also likely that the Big Five personality traits will be associated with the choice of different routes for achieving meaning, structure, community, efficacy, and freedom from stress in one's projects. These routes are tapped by the specific dimensions used in Personal Projects Analysis methodology, and several differentiable patterns of linkage can be suggested.

A sense of meaning, for example, might be achieved primarily through enjoyment of one's projects, a path we expect to be linked with Extraversion. But meaning can also be achieved by being engaged in pursuits which are highly self-expressive and absorbing or because they reflect one's core values (see, for example, Lydon & Zanna, 1990). We anticipate that project meaning will be negatively correlated with Neuroticism and positively correlated with Extraversion and Conscientiousness, though different patterns of dimensional scores are likely to appear (Little, 1988, 1989).

While a sense of meaning in one's projects may be a necessary condition for human well-being, it is unlikely to be sufficient in itself. One's current projects, however meaningful, may be so disorganized and chaotic that one's overall sense of coherence in life is compromised. Again, there are alternative dimensional routes to achieving a sense of structure, including initiating and controlling one's projects, being able to manage time effectively, and avoiding conflict between projects (Little, 1987b). Previous studies have shown that Paulhus's (1983) Spheres of Control scales, particularly interpersonal control, are significantly related to measures of project structure. Similarly, we anticipate that Conscientiousness will be directly, and Neuroticism inversely, associated with several dimensions of project structure.

It is possible that one's projects may be highly meaningful and well organized and yet they are unknown to, ignored by, or even actively sabotaged by other people. This is the theme of project community and it is expected to have fairly clear patterns of positive association with

Extraversion and Agreeableness. The two dimensions we use to operationalize community, visibility (whether a project is visible to others) and "others' view" (whether it is seen as important by them), are not so much alternative routes toward community but sequentially dependent steps in obtaining a sense of support. The ability to convince others of the importance of a personal project necessitates at the outset that person's awareness of the project and dispositionally linked skills in communicating in this domain (Argyle et al., 1989; Lecci, 1988; Little, 1989). Here, too, however, we can anticipate that the different components of a sense of community in one's projects might be differentially associated with NEO-PI traits. Agreeable individuals, for example, may be particularly concerned with ensuring that others value their projects, while extraverts may be more stimulated by the mere presence of others in their projects, irrespective of the others' affirmation of the worthiness of the project.

Though engaged in projects which are meaningful, structured, and supported by others, individuals still need to feel a sense of efficacy and freedom from undue stress in order to meet the challenges of daily life (Bandura, 1986). Here again, both the major themes and specific dimensions of Personal Projects Analysis are likely to be linked with NEO-PI scales. A sense of efficacy may be achieved by experiencing progress in projects to date, and by anticipating their continued success. While these two dimensions are typically highly correlated, we have found evidence in previous research that there can be subtle differences in the linkage of these aspects of efficacy with personality traits. Optimistic individuals (Scheier & Carver, 1985) have been shown to be high in a sense of efficacy regarding their personal projects as indexed by the expected success (outcome) column, but do not show any tendency to rate their current progress as particularly high, suggesting that whereas neurotic individuals imbue their projects with a generalized negative gloss, pessimistic individuals restrict their negative evaluations to the future tense (Little, 1989).

Finally, we anticipate that stress will show the strongest pattern of temperamental links with NEO-PI domains, with the specific stress dimension carrying most of this variance. The two other dimensions, difficulty and challenge, though consistently covarying with stress, do not carry the negative implications of the stress dimension.

To summarize:

1. Neuroticism is expected to be significantly linked with low scores on dimensions assessing project meaning, structure, community, and

efficacy and high scores on project stress. Within these themes, the highest correlations with Neuroticism are expected to be found with those dimensions that are most affectively charged, such as stress and enjoyment (negatively). Because of its hypothesized link with negative affectivity, we anticipate that these patterns of problematic project links will generalize across both interpersonal and academic project domains.

2. Extraversion is expected to correlate significantly with the “positive” dimensions underlying project meaning, structure, community, and efficacy and inversely with project stress. This pattern is expected to be particularly strong in the domain of interpersonal projects, though the postulated positive affectivity base of Extraversion suggests that affectively charged dimensions such as enjoyment and (low) stress may generalize across project domains.

3. Openness is expected to correlate with dimensions underlying project meaning across the academic and interpersonal project domains.

4. Agreeableness is expected to be associated with meaning and community and low stress across domains, but particularly in the domain of interpersonal projects.

5. Conscientiousness is expected to be associated with high scores on a broad spectrum of positive project dimensions, particularly with respect to efficacy. This pattern is likely to be particularly strong in the academic project domain.

METHOD

Subjects

Subjects in this study were 147 Ontario university students who had agreed to participate in a longitudinal study of adaptation to university. They were drawn primarily, but not exclusively, from introductory psychology courses, for which they were given course credit. Forty-six men and 101 women participated in the study, with a mean age of 18.8 years at the initial stage of assessment.

Assessment Methods

The data for this study are based upon the first two administrations of an assessment battery containing the NEO-PI and Personal Projects Analysis, among other measures of university adaptation, emotional and physical well-being, and demographic information.

The NEO-PI (Form S) was administered on a take-home basis and yielded scores on Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. NEO-PI mean scores showed no significant differences from the university norms reported in the supplement to the NEO-PI manual (Costa & McCrae, 1989a).

Personal Projects Analysis was administered in its standard format (Little, 1983). After writing out their personal projects on the Project Elicitation List, respondents chose 10 projects (those they would most likely be engaged in over the next month), which they then proceeded to rate on 17 dimensions (on a scale from 0 to 10 with anchor points provided) on the Project Dimension Rating Matrix (Little, 1983). The dimensions, which have been described in detail elsewhere (Little, 1983, 1987b, 1989; Palys & Little, 1983), appear in essentially random order on the rating matrix. They will be listed here under their major theme headings.

Personal Project Meaning dimensions include project importance, enjoyment, self-identity (how typical of self the project is), value congruency (extent to which the project is consistent with one's core values), and absorption (how absorbing it is to work on the project).

Structure dimensions include perceived control, initiation (extent to which they were responsible for starting the project), and time adequacy (to work on the project). Community dimensions include visibility (to other people) and others' view (of the importance of the project). Project efficacy dimensions include outcome (likelihood of successful completion) and progress (how successful one has been to date on the project). Finally, stress comprises the dimensions of stress, difficulty, and challenge.

Two dimensions typically scored in projects analysis and subsumed under the structure theme are the positive and negative impact associated with each project vis-à-vis other projects in the system. These dimensions were not included in the present study because cross-impact is better measured with other components of projects methodology (e.g., Little, 1989) and because of a generally weak manifold of correlations with other variables with this particular sample.

For each respondent, 15 personal project dimension scores were calculated for correlation with NEO-PI scores. For each dimension, means were calculated by averaging across projects rated at both Time 1 and Time 2 during the study. While time effects are of considerable interest to us and for certain purposes should be analyzed separately, the present adoption of Personal Projects Analysis is meant to detect interdomain covariation with the five-factor model. To this end we decided to enhance the power of the design by calculating dimension scores over 20 projects rather than 10. We did, however, check on the correlations between mean dimension ratings at Time 1 and Time 2 in order to ensure that there was sufficient concordance to justify amalgamation. For each of the 15 dimensions, significant correlations were found between

dimensions from Time 1 and those from Time 2, ranging from .39 ($p < .001$) for initiation to .68 ($p < .001$) for enjoyment. In every case, the highest correlation of a dimension at Time 1 was with its corresponding dimension at Time 2. It appears as if the most stable project dimensions are those involving affective aspects of project evaluation, such as enjoyment; the least stable are those pertaining to structural aspects such as initiation, results which are consistent with our psychometric assumptions about differential stabilities of components of project systems (Little, 1988).

Internal consistency was also assessed by calculating alpha coefficients for each of the 15 project dimensions. While, due to the dynamic nature of project system content, we neither assume nor expect very high internal consistency in project dimensions, the consistent pattern of relationship with individual difference measures obtained in our past research suggests that at least moderate levels of consistency in project ratings will be found. Results are consistent with the assumption of moderate levels of internal consistency. The median alpha coefficient for the total set of dimensions was .70, with the range extending from .53 for stress to .77 for value congruency.

In order to examine domain generality, projects were also categorized into academic and interpersonal domains. Two independent judges achieved satisfactory interjudge agreements on categorical sorting (averaging over 88%). With the constraint that each respondent had generated at least one project in either or both domains, mean dimension scores were calculated separately by project domain.

Procedure

Students were contacted after acceptance to their first year at the university but before they had arrived on campus, in order to examine their personal projects and development at different periods of their adaptation to a new life setting. Compliance rate with original requests to participate was very high (80% of those originally contacted), and 82.6% of these completed both phases of the study. Ninety percent of the students completing the study expressed willingness to continue the study in their second year at the university.

Subjects were asked to pick up their package of assessment materials at our laboratory and return them within a week. Again, very high compliance rates were found, with virtually all subjects returning the package within the specified time period. The initial period of assessment with NEO-PI and Personal Projects Analysis was in late August and early September, prior to the beginning of lectures, but close enough to their beginning that academic projects were already appearing in their Project Elicitation Lists. Personal Projects Analysis modules were administered again 3 months later.

RESULTS

Table 1 displays the correlations between NEO-PI scales and personal project dimension scores as calculated across the full set of 10 projects, while Table 2 breaks out the results separately for academic and interpersonal projects.

Table 1 confirms the expectation of a positive relationship between Neuroticism and the viewing of one's personal projects as problematic. While not consistently related to lack of meaning, Neuroticism is clearly associated with a lack of enjoyment in one's projects, and to a lesser extent, with the perception that they are not self-expressive. Neuroticism is also highly correlated with perceived lack of control and with a sense of time pressure. Each of the dimensions underlying perceived inefficacy and stress are highly correlated with Neuroticism. Contrary to expectations, no correlations are found between Neuroticism and dimensions relating to a sense of community in one's projects. Consistent with our hypotheses, Table 2 shows that the relationships between Neuroticism and the more affect-laden dimensions (stress and enjoyment) generalize across the interpersonal and academic project domains. However, other problematic dimensions such as time pressure and lack of progress and control are significant only for the interpersonal domain.

The pattern of correlations with Extraversion in Tables 1 and 2 is also consistent with our hypotheses, showing a broad spectrum of moderate linkages with dimensions of meaning and strong correlations with efficacy. Extraversion is also significantly correlated with project visibility and with having sufficient time in which to carry the project out. Unlike Neuroticism, however, there is clear evidence of domain specificity in the case of Extraversion. For interpersonal projects, 12 of the 15 dimensions correlated significantly with Extraversion, while only 2 did in the academic domain. The exception to this pattern is the generality across projects domains of correlations with efficacy, though here, too, the correlations in the interpersonal domain are substantially greater than in the academic domain.

Openness, as displayed in Table 1, is significantly correlated with several dimensions of meaning and with control and lack of difficulty in personal projects. It is the only NEO-PI scale significantly related to project initiation. However, unlike the results with Extraversion and Neuroticism, Openness shows neither a clear pattern of generality nor domain specificity when project domains are examined in Table 2.

Table 1
Correlations between NEO-PI Scales and Personal Project
Dimension Scores

Project dimensions	NEO scales				
	N	E	O	A	C
Meaning					
Importance	.04	.14*	-.08	.14*	.21**
Enjoyment	-.27***	.15*	.18**	.08	.23***
Value congruency	.05	.00	.19**	.14*	.10
Self-identity	-.14*	.16*	.15*	.06	.27***
Absorption	-.11	.17*	.12	.06	.26***
Structure					
Control	-.27***	.07	.13*	.08	.05
Initiation	-.11	.04	.17*	-.02	.04
Time adequacy	-.15*	.19**	-.07	.21**	.24**
Community					
Visibility	-.03	.19**	.01	.05	.22**
Others' view	.08	-.02	.01	.08	.18**
Efficacy					
Progress	-.32***	.28***	.05	.13*	.33***
Outcome	-.23**	.26***	.12	.19**	.28***
Stress					
Stress	.33***	-.12	-.06	-.21**	-.10
Difficulty	.23**	-.12	-.18*	-.20**	-.10
Challenge	.20**	-.12	-.04	-.11	-.01
<i>N</i>	171	176	168	178	172

Note. Column *N*s differ due to missing values or multiple responses on some of the NEO-PI protocols. Cases were deleted on an analysis-by-analysis basis rather than a case-wise fashion to maximize *N* for each correlation coefficient. Given the directional hypotheses guiding the investigation, all significance tests are one-tailed. NEO-PI = NEO Personality Inventory. N = Neuroticism; E = Extraversion; O = Openness to Experience; A = Agreeableness; C = Conscientiousness.

* $p < .05$

** $p < .01$

*** $p < .001$.

Agreeableness, in Table 1, shows a pattern of correlations with project dimensions that in many respects parallel those for Extraversion, but generally at lower levels of significance. However, Table 2 reveals a distinctive pattern that differentiates the two dimensions. With respect to dimensions relating to project meaning, Agreeableness shows gener-

Table 2
Correlations between NEO-PI Scales and Personal Project Dimension Scores for
Academic and Interpersonal Projects

Project dimensions	NEO scales											
	N			E			O			A		
	Aca	Int		Aca	Int		Aca	Int		Aca	Int	
Meaning												
Importance	.08	-.07		.09	.14*		-.11	-.04		.13*	.13*	.16*
Enjoyment	-.19**	-.16*		.10	.27***		.09	.05		.13*	.14*	.23**
Value congruency	.03	.10		.03	.09		.12	.22**		.10	.15*	.13*
Self-identity	-.02	.00		-.04	.25***		.15*	.12		.15*	.09	.36***
Absorption	-.05	.01		.06	.18*		.10	.04		.15*	.16*	.35***
Structure												.23**
Control	-.12	-.19**		.00	.13*		.00	-.01		.04	.16*	.11
Initiation	-.09	-.03		.08	.12		.02	.10		-.01	.08	.02
Time adequacy	-.09	-.13*		.10	.24***		-.09	-.16*		.16*	.26***	.34***
Community												.13
Visibility	.09	-.08		.07	.24***		-.08	.05		.04	.11	.13*
Others' view	.08	-.12		.00	.11		.07	.02		.11	.18*	.24**

ality across academic and interpersonal projects. Irrespective of project domain, Agreeableness is generally associated with positive evaluations of the meaningfulness of personal projects. On the other hand, the relationships with stress and efficacy show a very clear pattern of domain specificity, somewhat higher, in fact than that found for Extraversion. It is in the interpersonal but not the academic project domains that Agreeableness is associated with lack of stress and with greater efficacy.

Conscientiousness, as indicated in Table 1, has the strongest pattern of relationship with project dimensions, being significantly correlated with meaningfulness, community, and, particularly, efficacy of personal projects. Table 2 demonstrates that these relationships are not domain-specific but, with minor exceptions, tend to generalize across both interpersonal and academic projects. Neither structure nor stress are strongly linked with Conscientiousness. One notable exception, however, relates to having sufficient time to work on one's projects. This is significantly correlated with Conscientiousness, strongly so in the domain of academic projects.

DISCUSSION

The central empirical question underlying this research was whether the NEO-PI would be able to capture variance in the appraisals that respondents' make about their everyday personal projects. At the outset of the discussion it should be noted that this is a rather conservative test of the five-factor model. Personal projects are extended sets of action which are influenced not only by the stable individual differences of the agents carrying them out, but also by factors in the surrounding contexts of daily life. Moreover, the specific appraisal dimensions which we have examined in this study were not chosen so as to optimize linkage with the NEO-PI scales. Rather, the dimensions have been chosen based on their fidelity in capturing both theoretically and clinically important aspects of coping with daily undertakings. Finally, there was considerable homogeneity in the sample, all of the respondents being first-year students in the beginning stages of a longitudinal study on university adaptation. In spite of these constraints, the pattern of results offers clear confirmation that the Big Five traits as measured by the NEO-PI capture significant variance and provide theoretically coherent links with measures of personal project systems.

Consistent with earlier exploratory research (Little, 1989), the present

results confirm the centrality of Neuroticism and Conscientiousness as major predictors of problematic and positive project system evaluations, respectively, but also showed patterns of association between the other three NEO-PI scales and appraisals of personal projects.

While the present study did not attempt to unravel the processes mediating the links between traits and personal project appraisals, the results provide some support for temperamental, instrumental, and experiential linkages.

Neuroticism, for example, is most clearly linked with affective dimensions such as stress and low enjoyment, and these relations generalize across academic and interpersonal projects, consistent with the notion of generalized negative affectivity. While it was anticipated that Extraversion would show a corresponding positive affectivity link, this was only partially confirmed. Extraversion had its strongest links and cross-domain generality with efficacy, rather than enjoyment, and its most extensive pattern of association was with projects in the interpersonal domain only. This is more consistent with an instrumental view in which interpersonal, but not academic, projects provide satisfaction of needs presumed to characterize extraverts, such as affiliation or arousal. Relatedly, Omodei and Wearing (1990) have shown how both the need satisfaction and intrinsic enjoyment associated with personal projects are strong, independent predictors of well-being.

While Agreeableness resembles Extraversion in its pattern of positive relationships with personal projects, the data suggest that somewhat different paths are involved. Though extraverts appear to be engaged in more self-expressive, visible projects, agreeable individuals engage in those which while clearly unstressful are also less self-prototypical and less visible to others. This accords well with a high frequency pattern found in personal projects research of a rather "laid back," agreeable individual in contrast to the more assertively buoyant extravert (see, for example, Horley, Carroll, & Little, 1988). It would be valuable to examine these issues with a more finely focused research design in the future.

The linkages between Openness and personal project evaluations are distinguished by several features. First, they are generally at a lower level of significance than correlations with the other NEO-PI scales, consistent with earlier research (Little, 1989). However, Openness does relate to dimensions which are otherwise unrelated to the other Big Five dimensions, such as value congruency and initiation. This suggests that Openness may well have its clearest linkages with personal projects in

their initial stages of formulation, particularly that of project inception (Little, 1983). It may be the case that individuals high in Openness are more likely to entertain a large number of projects in everyday life and that the constraint of rating only 10 projects in the present study obscured relationships that would be apparent if we were to examine the larger set of projects generated during the project elicitation stage. Indeed, when we correlated the NEO-PI scales with the total number of projects generated during the elicitation phase, Openness was the single significant correlate ($r = .27, p < .001$). This also raises the possibility that Openness may have stronger relationships with dimensions based on PAC units such as current concerns (Klinger, 1987) and personal strivings (Emmons, 1989b), which are located more toward the internal end of the PAC spectrum than are personal projects or life tasks.

Our exploratory research in this area strongly suggested that Conscientiousness would be the best predictor of overall positivity in individuals' personal project systems, and this was strongly confirmed in the present study. Indeed, in many respects it is Conscientiousness, rather than Extraversion, which gives evidence of a generalized positive affectivity, showing a broad spectrum of correlations with positive project variables, as well as cross-domain generality. Just as Extraversion and Agreeableness exhibited somewhat different paths toward positive project systems, it is instructive to examine how Conscientiousness and Openness compare, particularly with respect to the high levels of meaningfulness which each dimension predicts.

The meaning dimension most highly correlated with Openness is value congruency, while for Conscientiousness project enjoyment and self-prototypicality are distinctively high. At first this seems counter-intuitive. Particularly given McCrae's (1987) evidence that open individuals might be considered to be creative people, one would anticipate that they would more likely be characterized by enjoyable, self-expressive pursuits than the conscientious individual. Those high in Conscientiousness might be expected to be more concerned with carrying out the obligatory and somewhat onerous tasks of daily life. While consistent with their values, these would not likely be intrinsically enjoyable pursuits. The present data portray quite a different picture. What might help explain this apparent contradiction of expectations? Unlike their conscientious colleagues, individuals high in Openness are more likely to initiate their projects, and this initiatory tendency may well account for the fact that they are able to achieve value congruency more easily than their conscientious peers who are relatively more likely to

have their projects thrust upon them. Conscientiousness, on the other hand, may actually be more associated with an accommodative style in projects management which yields both efficacy and enjoyment. Rather than seeking out enjoyable projects as their open peers do, conscientious individuals have the capacity to render enjoyable the projects that are required of them by others or to transform mundane activities into estimable undertakings. This requires the ability to "spin" projects in such a way that motivation is enhanced by the process of working on projects rather than on any particular end they may serve (Little, 1989).

There are several high-priority areas for future research on the linkages between personality and personal action. First, the present study has dealt with only the Big Five traits and has not examined their underlying components or facets. Again, our preliminary work in this area suggests that this finer level of resolution in trait measurement provides additional insights into the subtleties with which stable traits impact upon the appraisals of personal projects (Little, 1988).

Only two project domains, the interpersonal and academic, were addressed in this research. Other domains, particularly health/body projects (e.g., "losing weight") and intrapersonal projects (e.g., "controlling my temper better") deserve intensive scrutiny, not only because of their intrinsic importance, but also because exploratory research suggests they may offer particularly interesting domains in which alternative paths toward successful adaptation may be discerned (Little, 1988).

Finally, there are potentially important counseling and clinical implications of research linking personality and personal action (Costa & McCrae, 1989b; Little, 1987b). While trait measurement offers broad guidelines for designing therapeutic interventions that are compatible with the dispositions of clients, personal projects and other PAC measures offer personalized samples of the current concerns, strivings, tasks, and projects in which individuals are involved. These units, linked to traits but open to revision, reconstrual, and reformulation may offer leverage points for constructive change. Analysis of the Big Five traits can illuminate the perplexities of the human condition. In the same light, PAC units might also provide some pathways out of them.

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