Exploring the Relationship Between Personal Persistence and Personal Projects: Abstract Reasoning and Everyday Undertakings as Functions of the Self

by

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ABSTRACT

Without doubt, we all undergo changes as we muddle through our daily lives. Nevertheless, people manage to perceive themselves as continuous in time, either by trivializing change, or by focusing on the narrative thread connecting the various time slices of one's life. The current study investigated how the choice of self-continuity strategy is reflected in how people construct their everyday projects: in how they experience meaning, stress, efficacy, structure, and community, as well as how projects are used to bring about changes to the self, or achieve a sense of connection to past self aspects, as well as one's culture. Relationships between personal projects appraisal and subjective well-being and personality were also examined. Results indicate that group differences are not observed on overall project appraisals or well-being, but are revealed when probing project content domains and the interrelation between project domains and well-being/personality.

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This thesis is dedicated to my mother,

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whose life nurtures my aspirations,

and who inspires me to become who I want to be.

Introduction

This study examines the relations between abstract conceptions of personhood and everyday projects and activities in a sample of undergraduate students. The overall objective of the project was to find preliminary answers to a set of four interrelated questions: How are conceptions of the self reflected in our everyday actions? Conversely, can our routine lists of daily projects and personal strivings—the nitty-gritty of our personal lives—tell us anything about implicit conceptions of personhood? How do such projects function to maintain or modify our implicit understanding of ourselves? Finally, how are abstract conceptions of selfhood related to other aspects of self such as subjective well-being and personality structure?

In this introduction, I begin by noting the variety of ways in which 'the self' has been discussed in the psychological and philosophical literature. I then introduce the idea that, whatever else they may be, selves are commonly understood by the persons who possess them, to be "continuous" or persistent despite obvious and accumulating evidence in every life of personal change over time. After presenting the general findings from research on the ways in which young persons attempt to resolve this 'paradox of personal persistence and change', attention is then turned to the growing literature on 'personal projects' and how such projects can be predictive of personal well-being. This is followed by the presentation of a set of arguments in favor of the joint study of personal persistence and personal projects.

Approaches to the study of selfhood

The self is a much studied phenomenon. From William James' classic distinction between the knowable *Me* and the knowing *I* (James, 1981), through Erikson's (1968) work on the importance of identity formation during adolescence, and to more contemporary research on relations between self-esteem and adjustment, on self-reference effects and memory, on the achievement of self-knowledge, on meta-cognition and executive function, the variety of attempts to categorize the various aspects of 'the self' is, at the very least, daunting. Reviewing the full breadth of this literature would be impossible within the confines of this introduction (see Baumeister, 1998, for such a review). The strategy instead will be to reduce the problem space to a more manageable size by ruling out certain large portions of the literature on matters of selfhood.

What is perhaps most problematic about the self as a topic of investigation is that it is so all-encompassing. It is both content (self-knowledge) and process (self-other differentiation), structure (self-concept) and function (self-regulation). It has both evaluative (self-esteem) and agentic (self-efficacy) aspects. Though clearly related to the idea of selfhood, none of these topics will be explored in this study. The research is not about the content or valuation of identity or the capacity to reflect upon such content or evaluations. Instead, the research centers on the continuity or persistence of the self—on how the self manages to persist despite change in these other quarters and on how this continuity is maintained through, or reflected in, everyday personal projects. For that reason, there is no need to review the literature on self-esteem, self-efficacy, self-other differentiation, self-awareness, self-consciousness, or any of the other hyphenated versions of self-anything.

Without the hyphen, that is, by removing the contents and processes that are commonly used to refer to aspects of personal experience, we are left with simply 'self.' This has the desired effect of narrowing the relevant literature somewhat, but not by much. One way to restrict the scope of this problem space still further, is to note that 'the self' is temporally, culturally, and developmentally constrained. It has been argued, for example, that 'the problem of the self' is a modern phenomenon; that it is most salient in Western cultures, and predominantly a problem of adolescence and early adulthood (Baumeister & Tice, 1986; Suls, 1989).

Baumeister (1998) argues that, while in earlier times stable characteristics like one's age, gender, and family were decisive determinants of one's life and identity, nowadays, much more flexible and fluid characteristics like choice, ability and perceived traits—all subject to negotiation and change—determine one's identity. In the twentieth century, adolescence became the "period of indecision, uncertainty, experimentation, and identity crisis" (Baumeister, 1998, p. 726; see also Baumeister & Tice, 1986). McAdams also refers to the problem of self identity as a modern one (McAdams, 1991; 1996a; 1996b; 1996c; 1997; 2001), and maintains that "it is through story and story only ... that the I is able to confer a purposeful meaning onto the Me, a meaning in time." (McAdams, 1996c, p. 384). He conceives of the self as a story, and sees the solution to the modern problem of identity in an ongoing construction and reconstruction of life narratives, a process he called 'selfing': "The I is not a thing but rather a process... Selfing is the I. Selfing is the process of appropriating experience as one's own" (see also Bruner, 2001; Ezzy, 1998; McAdams, 1996c, p. 383; Sarbin, 1997). With regard to identity being a Western problem, McAdams refers to Baumeister's (1986) historical survey of the

concept of identity, stating that "it was sometime around the year 1800 when a significant number of Westerners began to write of problems they were encountering in experiencing a sense of continuous and individuated selfhood" (McAdams, 1996b, p. 297).

I do not wish to take issue with the idea that the problem of selfhood falls most heavily upon Western adolescents or young adults from Western cultures—indeed the current study is predicated on the idea of searching where the light is said to be brightest by studying contemporary Western, undergraduate students. Thus far, I have been proceeding by spelling out topics that will not be covered. Several other matters, however, do require discussion.

First, I need to be clear about what is meant by self-continuity (the terms 'self-continuity' and 'personal persistence' are used interchangeably throughout this thesis) and to differentiate it from a myriad of other self-related concepts. This will necessarily include a review of the concept of continuity or personal persistence, as well as the empirical methods that have been used to study its development across the life span. Second, I will need to review the literature on personal projects and to summarize what current research can tell us about the value of assessing such projects in various samples of young adults. Finally, the reader will need to be convinced of the merit of assessing both things simultaneously.

Self-continuity and the paradox of personal persistence

Our ordinary understanding of the concept of "person" or "self" includes two seemingly contradictory features: selves "embody both change and permanence simultaneously" (Fraisse, 1963, p. 10). On the one hand, we understand that persons

change—often dramatically so—over the course of their development. Yet, on the other, persons must somehow persist as continuous or numerically identical individuals, and be understood, as Locke (1694/1956) famously put it, "as the same thinking thing in different times and places" (p. 335). A conception of the self that did not include this standard of personal persistence, or that otherwise failed to meet Flanagan's "one self to a customer rule" (1996, p. 65), would simply fail to be recognizable as an instance of what we ordinarily take selves to be (Cassirer, 1923). If persons were not understood to persist at being the same person from one moment to the next, and to somehow own their own pasts, then no one could be held accountable for past actions and our concepts of moral responsibility would be emptied of meaning (Rorty, 1973), just as planning for an anticipated future would be fundamentally nonsensical. Our everyday meaning of self, then, creates a paradox: How can persons both change and yet remain the same? How is it that you are still 'the same' person that you were 10- or 20- or 50 years ago?

Several questions arise almost immediately. Can this 'paradox of personal persistence' be resolved? Have philosophers been hard at work on this problem? Do everyday people ever ponder such things—and do they have solution strategies at the ready? The answers to all of these questions seem to be 'yes.'

The paradox is widely acknowledged within the philosophical literature (Chandler, Lalonde, Sokol, & Hallett, 2003). References to the tension between change and stability can be found in the writings of Aristotle (who held that "animals differ from what is not naturally constituted in that each of these [living] things has within it a principle of change and of staying unchanged" cited in Wiggins , 1980, p. 88-89) and Locke (1694/1956) and William James (1910), and on into the modern era. Cassirer

(1923), for example, speaks of "temporal unity"; Chisholm (1971) of "intact persistence"; and Strawson (1999) of "diachronic singleness." Solutions to the problem are not, however, quite so common.

The most frequent solution offered by philosophers concerns not connections to a previously experienced past, but rather to an anticipated and not yet realized future. Selves, in MacIntyre's words (1984) are on a perpetual "quest." Persons are made, according to Bakhtin, not only out of "remnants of the past, but also from rudiments and tendencies of the future" (1986, p. 26)—rudiments that give "a sense to one's life as having a direction towards what one not yet is" (Taylor, 1988, p. 48). What holds our past, present, and future together in time is, as Flanagan (1996) puts it, the fact that: "As beings in time, we are navigators. We care how our lives go" (p. 67).

Psychologists have taken up this same forward-looking notion in various guises—most notably in Markus' work on 'possible selves' (e.g., Markus & Nurius, 1986; Markus & Ruvolo, 1989). For Markus and Nurius (1986), possible selves are the mechanisms of change for the self-concept. While traditional instruments assessing the 'now-self' provide ratings that are highly stable across periods as long as 35 years, possible selves, representing the "context of possibility that surrounds and embeds these self-views may have undergone substantial changes during this period" (p. 965). Whether hoped for or feared, possible selves, like Cantor's life tasks and Markus' (1983) self-schemas "focus more globally on what individuals hope to accomplish with their lives and what kind of people they would like to become as the significant elements of motivation" (Markus & Nurius, 1986, p. 956-957).

Few would argue that people ordinarily fail to see themselves and others as temporally continuous, or indeed, that we fail to care how our lives go. That we hold selves to be continuous is not really at issue—it is a definitional part of the term "person." What the philosophical literature does not, and perhaps cannot, tell us, however, is whether people routinely feel the need to resolve this paradox within the confines of their own lives, and, if they do, how is it accomplished? The answer to this last question can only be found by asking people how is it that they are still 'the same' person despite the obvious ways in which they seem to have changed over time. The section to follow, details the results of a series of studies designed to put this question to persons of various ages and cultural backgrounds.

Measuring thoughts about personal persistence

If one were interested in thoughts about personal persistence, one could simply ask people how it is that they manage to both change and yet remain the same. This may, however, not be the best way to start. First, we are not born with clear thoughts about how it is that selves persist across time—there must be some developmental process that lies behind whatever grown-up way of thinking eventually emerges. Second, there is no reason to assume (and every reason to doubt) that even the most articulate and self-aware among us would have answers to such questions at the ready.

A better way to proceed would be to introduce the topic more gradually and by way of example. One could, for instance, present fictional case histories of personal change over time and then solicit comments on the continuity of the person in question before more gently turning attention to the participant's thoughts about continuity in their

own life. The clear advantage of such a procedure resides in the ability to use it to study the development of thoughts about continuity across the life span.

A procedure of this sort was developed by Chandler and colleagues to study reasoning about personal persistence in childhood (Chandler, Boyes, Ball, & Hala, 1987), adolescence (Chandler, 1994; Chandler & Ball, 1990), and adulthood (Brandstätter & Lalonde, 2003), as well as in different cultural contexts (Chandler, 2001; Chandler, Lalonde, & Sokol, 2000; Chandler, Sokol, Lalonde, Hallett, & Jones, 2000; Lalonde, Chandler, Hallett, & Paul, 2001). The procedure involves presenting participants with a condensed version of the life story of a character (e.g., Victor Hugo's Jean Valjean in *Les Miserables*) who is said to undergo radical personal change over the course of the narrative. A set of probe questions are then used to elicit the participant's best thoughts as to why the protagonist as described at the outset should still be considered 'the same person' at the end of the story. Following a set of such stories, participants are then asked to describe themselves both as they perceive themselves in the present moment and at some point in their own distant past and to similarly justify their own self-continuity. A more detailed accounting of the procedures that make up this semi-structured interview will be presented in the methods section, but for the moment, the point to be made is that there are practical ways in which to query persons of different ages about what have previously been seen as matters of interest only to professional philosophers. More importantly, here is what these studies have found.

First, there is a natural developmental progression to thoughts about personal persistence. Children, in their middle-school years, claim that persistence is found in any and all things that remain constant across time: pointing to one's name, favoured

activities, or physical appearance is seen to be sufficient. Change, if it is acknowledged at all, is seen as peripheral: "I am still the same because I still play soccer" In time, children begin to offer reasons that become increasingly abstract. The hidden forces of unchanging personality traits come to form the focus of arguments offered by pre-teens: "I'm still the same because I'm still aggressive: I used to get in fights at school, now I'm only aggressive on the soccer field where it's OK to be like that." For adolescents, the reasons lie deeper still: "I am the ship that sails through the troubled waters of my life." Making sense of these arguments is sometimes difficult, but a clear age-graded pattern in terms of increasing sophistication can be detected (Chandler et al., 1987; Chandler et al., 2003).

The second general finding from these earlier studies is that arguments in favour of continuity can be effectively sorted into one of two general kinds. One way of winning the argument that you have not, in fact, changed, is to discount or trivialize change in favour of all those things about you that have managed to withstand the ravages of time. Claiming, for example, that the basic structure of your personality has remained the same despite the differing ways in which it might be expressed over time, is a change-defeating argument. A second strategy involves granting that change has occurred but finding some narrative or plot-like way of seeing all of the different ways one has been in the past as connected through a series of cause-and-effect chains to the person you take yourself to be. Chandler et al. (2003) have termed these alternative self-continuity warranting strategies Essentialist and Narrative accounts.

A more detailed description of these different levels and forms of reasoning is presented in Appendix A, but the present point is that young persons—in particular

adolescents and young adults—evidently do have accessible thoughts about matters of personal persistence that can be reliably recorded and scored.

The preceding goes some distance toward making the case that abstract conceptions of selfhood are somehow alive in the minds of ordinary young people—or at least that such conceptions can be made to appear under certain artificially arranged circumstances. But do these implicit conceptions of personhood play any role in day-to-day life? That is, does it matter whether one has a simple or complex notion of self-continuity relative to one's peers? Does it matter whether one holds to the view that change is the enemy of persistence, or instead that change is a natural part of the plot of one's life? If MacIntyre and Taylor and Flanagan and the rest of the philosophers are correct to suggest that "navigating" through a life that we are meant to care about is critically dependent on a sense of connectedness between past, present, and future, then having *some* thoughts on continuity would seem to be better than having none at all. In fact, among the more than 400 young persons so far subjected to the personal persistence interview described above (Chandler et al., 2003), the only ones found to be without good reasons whether simple or sophisticated, were those who were also known to be actively suicidal (Chandler, 1994; Chandler & Ball, 1990; Ferris, 2001). This connection between failures in self-continuity and suicide underscores the point that even if thoughts about such matters are slow to develop and not always on the tip of the tongue, or usually found only in the dusty writings of philosophers, they are nonetheless real and important.

As striking as it may be to find that suicidal persons are marked—perhaps uniquely so—by a loss of self-continuity, in itself, this fact tells us nothing one way or the other about whether reasoning about personal persistence is connected to anything but

decisions about acts of self-destruction. What we need to know, and what the current study aimed to determine, is whether the concrete ways in which we conduct our everyday affairs are in any way related to these abstract and implicit notions of personal persistence. Taking the measure of any such relation would demand not only a way of reliably assessing thoughts about continuity (which is arguably already in hand), but also some well-oiled procedure for capturing what is meant by "the concrete ways in which we conduct our everyday affairs."

Measuring the self in everyday life

In their discussion of "existential identity," Gecas and Mortimer (1987) note that the subjective experience of our own existence as unique does not derive from the fact that our experiences are different from those around us, but rather are a

> result of our *continuing reconstruction* of the past, as well as the anticipated future, from the perspective of the present. Each new present gives the individual a new perspective on the past and the future (in the form of goals, plans and aspirations) (p. 267).

One way to capture this reconstructive process in the real-time of everyday life and to monitor personal goals and plans and aspirations has been developed by Little in the form of Personal Projects Analysis (Appendix B, Little, 1983; Little, 1987a, 1988, 1989, 1998, 1999a, 2000b, 2001; Little & Ryan, 1979). As Little (2000a) defines them, personal projects are: "extended sets of personally salient action" (p. 90) which can range from 'taking out the garbage' to 'taking out my political opponent.' "They may be solitary or communal; onerous or easy. Projects can be forsaken or obsessed over." (p.

90). Such projects are said to be "jointly influenced by personal and contextual variables in dynamic interaction" (p. 90) and to act "as carrier units for person-environment transactions [through which] personality propensities and environmental affordances are brought into direct contact" (p. 90). Little (1996; 2001) locates personal projects—along with other personal action constructs (or PAC units), such as life tasks (Cantor, 1990; Cantor, Norem, Niedenthal, Langston, & Brower, 1987; Zirkel & Cantor, 1990), personal strivings (Emmons, 1986, 1989), and current concerns (Klinger, 1975) on the second of three tiers in personality psychology. According to McAdams' framework (1996b) trait researchers occupy the first level, theorists related to action constructs such as personal projects occupy the second, and Narrativist or life story theorists such as McAdams (1991; 1997; 2001) and Sarbin (1993; 1997) are situated on the third level. Little (2001) argues that it is with personal action constructs "on the second floor—where the action is—that we are offered the best opportunity for conceptual commerce with the trait-ERs downstairs and the narrative theorists up in the loft" (Linking levels: a contemporary example of meeting the integrative challenge, para. 3).

Little's method of gathering and analyzing these projects involves asking participants to first describe the routine tasks and plans that they make and carry out in their everyday life (e.g., planning a trip, deciding to lose 5 pounds, taking up a new hobby) and then to rate these plans or projects on a set of some 20 or more dimensions. Typical dimensions include the importance of the project, its level of difficulty or enjoyment, the extent to which it is visible to, or involves other people, etc. (Little, 1983, 1987a, 1988, 1989, 1998; 2000b, see Table 1 for an overview of dimensions included in this study). These personal projects can then be reliably categorized according to content

Table 1
Traditional and self-related personal project dimensions grouped by conceptual factors

Conceptual Factor	Dimension
Meaning	Importance
	Enjoyment
	Self-identity
	Value-congruency
	Absorption
Structure	Control
	Initiation
	Negative impact
Community	Visibility
	Others' view of importance
	Support
Efficacy	Outcome
	Progress
	Project Stage
Stress	Difficulty
	Stress
	Challenge
Not assigned	Distractibility
	Commitment
	Community/Culture
Present Self	Centrality
	Expression
Past Self	Preservation
	Re-establishment
Future Self	Enhancement
	Improvement
	Experimentation
	Extension
	Exploration

into one of six categories (Little, 1988, 1994; see Appendix C for a description of project categories.

From a social ecological theoretical perspective, personal projects have been designed to meet criteria of a methodological transactionalism, subsumed under the four assumptive themes of constructivism, contextualism, conativism, and consiliency (Little, 1999a, 2000b). Constructivism refers to the credulous approach to assessment purported by Kelly's (1955) personal constructs. In that, research participants are viewed as "inquisitive co-investigators" (Little, 2000b, p. 80) who, when asked about their thoughts on a particular situation, context, or transition, "might just tell us" (p. 81). In addition to this *reflexivity* aspect, personal projects are also said to be *personally salient* to the participants, rather than reflecting the investigator's professionally salient constructs (p. 81), and *personally evocative* units of analysis (as reported by research participants). The *contextual* aspect of personal projects measurement is reflected in elicited information about the spatial (indicated by the 'where' column), social ('with whom' column), and temporal ecologies (indicated by Project Stage) projects are embedded in (Little, 1999a). In addition, particular contextual aspects of personal projects have been assessed with specially designed *ad-hoc dimensions* (e.g., the special ecologies of doctoral students working on their dissertations, Pychyl & Little, 1998). The assumptive theme of conativity (*conative* stands for trying, striving, seeking after) refers to personal projects as volitional undertakings in goal pursuit. Personal projects analysis measures an individual's goals in a *systemic* (a number of projects rather than just one), *middle-level* (in between of higher order values and specific behavioural acts), and *modular* (e.g. by

addition or subtraction of 'ad-hoc' evaluation dimensions) fashion. The conative aspects of personal projects will be described in more detail later in this section.

Policy and practical implications are rooted in the consiliency assumption of personal projects analysis. Little (2000b) invokes Wilson's (1998) use of the term consiliency to refer to the need for linkage in environment behaviour research. Consiliency comprises the need for conjoint, integrative measurement, as well as *direct applicability*. In the face of Simpson's paradox (as described by Little, 2000b: the mathematical notion that "relationships between a set of variables measured at one level of analysis are not mathematically constrained to hold at other levels of analysis", p. 85) and inferential fallacies such as the ecological fallacy, researchers are reluctant to move between levels of analysis. Personal projects analysis allows for *conjoint* individual (evaluating relationships between projects of a single person) and normative levels of measurement (i.e., averaging ratings across projects for each individual and analyze relationships on the group level), and thus offers an integrative venue for promoters of single case studies and clinical practice on the one hand, and researchers favoring nomothetic analyses on the other (Little, 2000b). Gee (1998) compared individual versus normative level of measurement of personal project systems and "found clear and striking evidence that the underlying nature of the personal project space for normative level analysis is strongly isomorphic with that obtained at the individual level, suggesting that there may be mutual informative transfer of research findings between case studies and the more traditional normative inquiry in project analysis" (Little, 2000b, p. 85-86). Personal projects also provide *integrative* measurement of cognitive (in terms of plans and goals), affective (e.g., project dimensions Enjoyment or Stress), and behavioral

aspects of personal action. Finally, personal projects "allow for direct applicability in clinical, counseling, organizational change, or community development interventions; in essence they afford tractability for change attempts" (Little, 2000b, p. 86; compare also Little, 1987a; Karoly, 1993; Phillips, Little, & Goodine, 1996, 1997). These features of personal project analysis prove especially valuable in conjunction with other, more traditional measures of personal functioning such as subjective well-being and personality traits. It is to these other measures that we now turn.

Personal Projects and Subjective Well-being

One aim of personal projects analysis is to determine how the content, appraisal, and dynamics of these projects impact the individual's subjective well-being (SWB). In his social-ecological model of well-being, Little (2000a) hypothesizes stable personal characteristics (such as traits and temperament) and stable contextual features as well as free traits (a "needed complement to our conventional views of fixed traits", and defined as "patterns of conduct in the service of one's personal projects that run counter to one's natural temperamental or trait dispositions", Little, 2000a, p. 110; compare also Little, 1996) and personal contexts (defined as "idiosyncratically construed objects, situations, settings, and circumstances of daily life" Little, 2000a, p. 101) to have direct and indirect influences on broadly defined subjective well-being outcomes. The personal project can be conceptualized as a final pathway through which these diverse influences converge. As such, projects are conceived of as "carrier units for person-environment transactions, because it is through them that personality propensities and environmental affordances are brought into direct contact" (Little, 2000a, p. 90-91). As such, well-being is expected

to be associated with personal projects that are judged to be worthwhile, managed effectively, supported by others, likely to succeed, and not unduly onerous (Little, 1998, 2000a). This description corresponds to Little's five conceptual factors of project meaning, structure, community, efficacy, and stress, into which the core dimensions of personal project analysis can be aligned (see Table 1).

Characteristics of a person's personal project system have been related to subjective well-being in numerous contexts and countries (Little, 1985, 1988, 1989, 1998, 2000a). In an early study, Palys and Little (1983) outlined how organizational characteristics of projects impact on life satisfaction. Yetim (1993) tried to replicate these North-American findings in Turkey, with somewhat limited success, indicating the need for sensitivity to diverse contexts such as economic conditions. Pychyl and Little (1998) examined the impact of personal projects characteristics of doctoral students on their subject well-being, and Salmela-Aro (1992) the differences between the project systems of students seeking psychological counseling versus those who don't. Wallenius (1999) examined the impact of perceived supportiveness of one's projects by the environment on SWB, and others investigated the relationship between SWB and projects in specific domains, such as occupation (Christiansen, Backman, Little, & Nguyen, 1998), and interpersonal projects (Salmela-Aro & Nurmi, 1996b). Differential personal projects characteristics were examined with clinically depressed populations (Röhrle, Hedke, & Leibold, 1994), and were associated with depressive symptoms in college students (Lecci, Karoly, Briggs, & Kuhn, 1994), as well as with symptoms of hypochondriasis and somatization in college women (Karoly & Lecci, 1993). Omodei and Wearing (1990) examined the relative importance of need satisfaction and involvement in personal

projects for well-being, while Ruehlman and Wolchik (1988) investigated the effects of social support and hindrance of an individual's personal projects on their well-being.

While much of this research has applied a cross-sectional approach, a few studies investigated the relationship between goal-oriented pursuits and subjective well-being longitudinally. For example, such studies monitored project content changes in relation to SWB during the transition to (Salmela-Aro & Nurmi, 1997) and from University (Yamamoto, Sawada, Minami, Ishii, & Inoue, 1992), as well as during the transition to motherhood (Salmela-Aro, Nurmi, Saisto, & Halmesmäki, 2001). A longitudinal examination of the direction of the interrelationship between personal projects and depressive symptoms indicates that the causal arrow seems to be stronger from depressive symptoms to personal project appraisal than vice versa (Salmela-Aro & Nurmi, 1996a).

The consistent finding that has emerged from the analysis of these personal projects is that what we choose to do in our everyday lives is an important determinant of our subjective sense of well-being (Little, 1985, 1989, 1998, 1999a, 2000a). Recall that Little's social-ecological model of well-being posits that the first four conceptual factors (Meaning, Structure, Community, and Efficacy) are positively related to subjective well-being, while Stress is negatively related (Little, 2000a). Empirically, however, there is stronger evidence for this hypothesis for the factors Stress, Efficacy, and to some extent Structure, while the factors Meaning and Community fail to exhibit consistent relationships with well-being (Little, 1998; McGregor & Little, 1998). In a quantitative review, Wilson (1990) identified Stress, Outcome, and Control as the dimensions with largest effect sizes in predicting life satisfaction (Little, 1989). Later studies confirmed

this finding: Yetim (1993) found the group with higher life satisfaction to experience higher Control, Outcome, and Progress associated with their project systems, yet they also scored higher on the community dimensions Others' view of importance, and Visibility. Salmela-Aro (1992) found that students seeking psychological counseling report lower outcome expectations, and also score lower on measures of subjective well-being, and Christiansen et al. (1998), found the strongest correlations of subjective well-being with the dimensions of Stress, Progress, and Difficulty. Röhrle et al. (1994) observe much higher Difficulty, Stress, and Absorption associated with project systems of depressed participants, while control group participants report higher levels of Control, Time adequacy, Outcome, and Self-identity.

McGregor and Little (1998) investigated what seemed to be a paradoxical lack of relevance of meaning to SWB, and suggested that this finding is a function of the specific SWB measures used. In their factor analyses of a variety of subjective well-being measures they derived two factors of SWB, Happiness and Meaning. Relating these factors to personal project factors confirmed their hypothesis, in that project Efficacy, Fun, and Support were related to the happiness aspect of SWB, while Integrity (equivalent to the factor project Meaning) related to the meaning aspect of SWB. The fact that empirical research more often uses happiness oriented measures (such as affect, stress, and depression scales), rather than those which also tap meaning (e.g., the Purpose in Life scale, Crumbaugh & Maholick, 1964) can then explain such lop-sided findings. Other explanations include a possible temporal effect: Efficacious project pursuit may be more important to concurrent SWB, while a lack of project meaning may take its' toll over time (Brandstätter & Baumann, 2003). In what has been termed the meaning and

manageability tradeoff, Little (1987b; 1989; 1998; McGregor & Little, 1998) describe the need for balance between pursuing meaningful projects as well as manageable ones.

Personal Projects and Personality Traits

The current study examines the relations between SWB and personal project systems and sets these relations against traditional measures of personality structure. In the social-ecological model of well-being described earlier, stable personal features are expected to influence subjective well-being through personal projects. Personal projects appraisal has indeed been linked to personality characteristics in expected ways (Little, Lecci, & Watkinson, 1992). When aggregating ratings across all projects of an individual and relating them to the Big Five traits, Neuroticism was found to be most strongly related to the Stress and Efficacy (negatively) dimensions, and Extraversion related to Efficacy and Meaning dimensions. Conscientiousness related to Meaning, Community, and Efficacy variables, and Agreeableness to Efficacy and Stress (negatively) dimensions, as well as some Meaning variables. Finally, Openness was found to relate to some Meaning and Structure dimensions (compare Table 1 for an overview of dimensions by conceptual factor). When examining relationships between the Big Five and specific project domains (i.e., academic and interpersonal projects, compare Appendix C), Little et al. (1992) found the relationships of Neuroticism and Conscientiousness to generalize across domains, while Extraversion and Agreeableness showed stronger relationships in the interpersonal domain. Openness showed neither a particularly clear pattern of generality nor domain specificity. However, individuals with

higher Openness to experience scores showed overall higher levels of project Initiation and Value congruency.

Selves in Time

In explicating how personal projects can be useful as a methodological tool to assess the distributed self, Little (1993) devised four aspects of what McAdams would term 'selfing' that are tapped by personal projects analysis. Each of these are briefly presented here, followed by a description of our own additional self-dimensions used in the current study. First, *self-expression* is captured by the listing of projects itself, yet more directly tapped by the rating dimension Self-identity, which showed direct relationships to a variety of positive personal project dimensions, and thus has been hypothesized to "form a central nexus through which other positive project dimensions are organized" (p. 168).

Second, *self-enhancement* was introduced to access how the self so distributed in self-expressive projects is evaluated – positively or negatively – for example by asking: "To what extent does this project enhance your sense of self-worth?" (Phillips & Little, as cited in Little, 1993, p. 170). Relationships similar to those observed with Self-identity were observed for the dimension Self-worth both with other positive project dimensions and with subjective well-being indicators.

Third, Little suggested *self-exploration* to be operationalized in intrapersonal projects. "Though less prominent in frequency, one of the most theoretically interesting domains of personal projects are those that focus on an individual's own motivation, personal characteristics, and sense of identity" (Little, 1993, p. 173). Little reported that

these projects were found to be particularly onerous and demanding, and a higher proportion of such projects was related to negative affect, Neuroticism, but also Openness to Experience, suggesting that for some individuals these projects may represent futile struggles with self (Salmela-Aro, 1992), while for others they may be meaningful self-exploratory ventures (Little, 1993). Zomer (2000) examined the more fine-grained differences in the construction of intrapersonal projects that could account for these different outcomes.

Fourth and finally, *self-extension* was conceptualized as the extent to which personal projects may facilitate and frustrate possible selves (Markus & Nurius, 1986; Markus & Ruvolo, 1989). By including rating dimensions such as self-completion, and possible-self facilitation in personal project analyses, Little (1993) and colleagues explored for example whether self-extensive aspects of personal projects were better predictors of subjective well-being than self-expressive aspects (operationalized by Self-identity). They found that possible self-facilitation was a better predictor for the younger group of the first year undergraduate students, while self-identity was a superior predictor for the older participants among the students.

In sum, then, Little concludes that "conative units of analysis such as personal projects provide a rather different set of lenses through which to view the self and its manifestations" (p. 178), and also "afford the opportunity to assist individuals in *changing* the self-conceptions by the examination and reformulation of their everyday personal projects" (Little, 1993, p. 178; compare also Little, 1987a).

Our hypothesis, then, is that not only can personal projects be used in counseling to systematically influence a person's self-conceptions (for example by reformulating

their projects into more manageable units and thus increasing a person's sense of efficacy), we think that people use their personal projects on an everyday basis to achieve or maintain certain self functions. In the current study, we have included variations on the four themes discussed above as separate rating dimensions, and have included dimensions capturing Centrality to self, Experimentation, Improvement, Re-establishment, and Preservation as well.

We described Self-expression as the "extent [to which] this personal project highlights or showcases an aspect of the self that already exists – a part of you that has not reached the surface but already exists", and complemented this dimension with the dimension Centrality ("how central this personal project is to your sense of self"). Self-enhancement deviates from Little's (1993) conceptualization since it asks "to what extent this personal project aims at improving upon an existing positive aspect of the self" rather than for its impact on self-worth, and was augmented by a similar dimension called self-improvement ("to what extent this personal project serves the improvement of an existing (negative) aspect of the self"). Exploration was operationalized by asking "to what extent this project examines aspects of the self", and Extension by inquiring "to what extent this project reflects an existing part of the self that is pushed or applied to new settings or displayed in a new manner". A related dimension was designed to capture a potential third step in a change process, of which Exploration (finding out where you are at) and Extension (trying something known in a new way) are the first two steps. Experimentation is a step into completely new territory, and captures "to what extent this personal project reflects trying new ways of being". Finally, a new aspect to capture past self connections and efforts at preserving the self (as opposed to change) seemed

worthwhile to include: Preservation was designed to capture the "extent [to which] this project prevents changes to existing aspects of the self by taking actions that strengthen the current self", and Re-establishment refers to the "extent [to which] this personal project serves to reconnect to or regain an earlier aspect of the self".

On the joint measurement of personal projects and personal persistence

If our personal projects are predictive of well-being, and if failures in personal persistence are associated with suicide, then we might predict a relation between the two measures at least at the extremes. That is, the personal projects of suicidal persons ought to be markedly different than those of more rank and file young persons. Indeed, evidence from personal project research involving students seeking psychological counseling (Salmela-Aro, 1992) as well as clinically depressed populations (Röhrle et al., 1994) supports this hypothesis. But beyond these extraordinary or tragic cases, there are other reasons to suppose that personal projects hold the potential to tell us something of value about the self-conceptions of their authors. First, personal projects are more than an arbitrary assemblage of mundane tasks or running 'to-do' lists. Instead, our personal tasks and goals represent a personal project system—an organized and focused set of plans that orient us toward an anticipated and valued future. As such, they can be seen to embody the person we take ourselves to be *en route* to becoming. If that is so, if personal projects are an expression of our ability to envision our own future and to work toward bringing it about, then an analysis of such project systems should provide a window onto conceptions of the self. Viewed in the opposite direction, it ought to be the case that conceptions of selfhood play an important role in the inception, construction, and

execution of personal projects. Personal projects represent concrete efforts to manipulate the environment and to engineer our own experience in ways that create the future we envision for ourselves. Our beliefs about the 'true' or 'authentic' self—the self that endures despite the changes that our own efforts are designed to bring about—is the yardstick against which the success of personal projects is measured. In short, then, here are the twin working hypotheses that have prompted this research: Personal projects propel our ongoing construction and reconstruction of self, while conceptions of personal persistence provide a rudder and a compass.

If Flanagan (1996) is right, that is, if "we are navigators" and really do "care how our lives go," then combining the study of self-continuity with the conceptualization of personal projects as "conative units of analysis" pertaining to motivation (Little, 1999b) and self (Little, 1993) may help us better understand how and why we plot the particular life course that we work to follow. Little (1993) has discussed the rise of a conative psychology in recent years, of which the emergence of personal action constructs, such as personal projects, but also current concerns (Klinger, 1975), life tasks (Cantor, 1990; Cantor et al., 1987; Zirkel & Cantor, 1990), and personal strivings (Emmons, 1986, 1989), as new units of analyses are only one manifestation. Little approvingly cites Bruner's (1990) *Acts of Meaning* as an invitation to cognitive psychologists to return to the study of meaning over concern with the computability of human information processing. For Bruner, the study of the self is an example of a cultural psychology that studies meaning and its use in practice. Self in use is "self distributed in action, in projects, in practice" (Bruner, 1990, p. 117).

This sea swell of contemporary interest in studying the "meaning" of selfhood is sustained by the availability of tools (personal projects analysis and the personal persistence interview) that claim to capture both idiographic and nomothetic dimensions of the self. Moving between these levels of analysis is, of course, an inherently risky business. But the real target of the current study is not simply the private thoughts of individuals about the routine business of managing their lives (their personal projects), nor even about their deeply held notions of personhood (self-continuity). The quarry is the conjunction of these two—how the ways in which we understand and navigate our own lives work to create the self. By applying both tools to the problem at hand, we would seem to have a better chance of capturing Bruner's 'self in use' or McAdams' 'selfing' or the elusive connection between self and culture:

> The Self, then, like any other aspect of human nature, stands both as guardian of permanence and as a barometer responding to the local cultural weather. The culture, as well, provides us with guides and stratagems for finding a niche between stability and change: it exhorts, forbids, lures, denies, rewards the commitments that the Self undertakes. And the Self, using its capacities for reflection and for envisaging alternatives, escapes or embraces or reevaluates and reformulates what the culture has on offer. (Bruner, 1990, p. 110)

The joint assessment of personal projects and conceptions of personal persistence would, it was hypothesized, tell us something of value about the public and private ways in which our participants attempt to influence the course of their own development by identifying the ways in which they quite literally preserve, alter, enhance, and re-create themselves as they navigate through time. To this end, we collected personal projects

questionnaires from close to 400 undergraduate students, and interviewed a sub-sample of 75 participants to determine their ways of thinking about their own and others' continuity in time. The details of exactly how this was done appear in the section to follow.

Methodology

Participants

The total sample consists of data collected at two different points in time. Data from 205 participants were collected in April 2002 (Cohort One), and data from 184 participants were collected in November and December of 2003 (Cohort Two). These two samples of participants are compared with regard to demographics and performance on the measures in Appendix D. Small differences were found between the two samples on several rating dimensions (see Appendix D for details). However, the differences are not of theoretical relevance, and no differences in demographic characteristics were observed, hence the samples were combined. What follows here is a description of the concatenated sample.

A total of 389 undergraduate students participated in this study and were given partial course credit for participation. Two-hundred-and-eighty-nine (74.3%) were female and 100 (25.7%) were male. Although the total pool of potential participants consisted of considerably more females than males (ratio of 1 male to 1.8 females according to the Office of the Registrar), there were still fewer male participants than expected, χ^2 (1, N = 389) = 18.40, $p < .001$. Although the overall age range is 17 to 55 years, with a mean of 19.56 and a SD of 3.02, the majority of participants are clustered around the lower end of this age range: 65.4% of participants were between the ages of 18 and 19 years, and a total of 96.9% fell within the age range of 17 to 24 years. Women (M = 19.48, SD = 3.32) and men (M = 19.77, SD = 1.87) did not differ with regard to age, $t(387) = -.82$, *ns*.

Of the 389 participants, 259 (66.4%) were Caucasian, 28 (7.2%) Asian, 4 (1.3%) East Indian, 5 (1.3%) Asian-Caucasian, 3 (.8%) Metis-Caucasian, 6 (1.5%) indicated

Canadian as their ethnicity, and 9 (2.1%) indicated other ethnicities (one each was First Nations, Latino-American, Persian, African, Sri Lankan, Jewish, Caucasian-Indian, Caucasian-Hispanic, and Chinese-Indonesian). The remaining 75 participants (19.3% of the sample) elected not to report their ethnicity or could not be contacted to provide this information.

Interview Sub-sample. A sub-sample of 75 participants completed the self-continuity interview. Fifty-three were female and 22 were male. Age ranged from 17 to 55 years, the mean age was 20.85 years (SD = 5.72). Fifty-nine (78.6%) self-identified as Caucasian, 9 (12.0%) as Asian, 2 (2.7%) as Caucasian-Asian, and 1 (1.3%) each as Latino-American, East-Indian, Caucasian-Hispanic, and Jewish. For one participant, ethnicity information was not reported. From the total of 75 participants, 34 (45.3%) had completed the paper questionnaire, and 41 (54.7%) had completed the web questionnaire.

Measures

The measures used in this study were: (1) The personal projects analysis questionnaire, (2) the self-continuity interview, and (3) the exploratory personal projects interview. In addition, Cohort Two participants also completed (1) the Satisfaction With Life Scale, (2) the Brief Measures of Positive and Negative Affect Scales, and (3) the Big Five Inventory.

Personal Projects Analysis

Personal Projects Analysis (Little, 1983, 1987a, 1988, 1989, 2000b) provides idiographic information about the projects or plans people are engaged in, as well as

nomothetic evaluations on how stressful, enjoyable, likely to succeed, well supported, etc., each of these projects are (the questionnaire is presented in Appendix B). Personal projects were described to participants as "the everyday kinds of activity or concerns that characterize your life at present." Examples given include "completing my English essay", "overcoming fear of meeting new people", and "losing ten pounds." Participants were first asked to write down as many of their own personal projects as they could within a 10-minute time period (*Project Elicitation List*). Participants were then asked to select from their list 8 projects that they believed "would provide the greatest insight into your life at present" (Little, 1998) and to rate each project on 29 rating dimensions using a scale extending from 0 to 10 (*Project Appraisal Matrix*). Participants were also asked to provide context information as to *where* and *with whom* they engaged in each project.

Modifications to the standard PPA procedure. Little (2000b) has conceptualized personal projects analysis as a modular assessment methodology that allows the 'traditional' or 'core' dimensions developed by Little to be supplemented with ad hoc dimensions that are of particular interest to other researchers. The dimensions used in this study comprise the 17 'core' dimensions (Little, 1998) which were complemented by two previously tested dimensions, *Distractibility* and *Commitment* (Brandstätter & Baumann, 2003) as well as ten ad hoc dimensions developed for the present study. Nine of these ad-hoc dimensions were added to capture specific ways in which projects might function in relation to the maintenance and change of a person's self-conceptions. Participants were asked how *central* each project is to their sense of self, and how each project might serve to *express*, *explore*, *extend*, and *improve* aspects of the self, and the extent to which a project allowed for *re-establishment* of a sense of self and for self *enhancement*,

experimentation, or *preservation*. These self-related dimensions were hypothesized to align according to their temporal orientation to *past* self, *present* self, and *future* self (see Figure 1). Finally, a *Community/Culture* dimension was added to capture the relatedness to one's community or cultural group that might be gained by involvement in a project.

Paper and Web Format. The questionnaire was completed either as a traditional pencil and paper measure (see Appendix B), or on-line in a computer-based web format. For these purposes, we produced a corresponding web-version of the Personal Projects Analysis questionnaire, with the questionnaire itself containing identical text, and the instructions slightly modified to correspond to the web-based format (e.g., "click the number" versus "circle the number"). Participants who elected to complete the on-line version of the questionnaire were first presented with an Informed Consent page, which they were asked to read and then to indicate (via buttons) whether or not they wished to participate. Those indicating consent were redirected to the questionnaire. Responses to questionnaire items were collected and transmitted to the researcher electronically.

Preliminary analyses of Cohort One data revealed unexpected but systematic differences between the paper and web questionnaires. For this reason, a separate study was conducted to determine whether those differences were due to the use of different questionnaire formats, or to pre-existing differences between participants who chose to complete either the web or the paper questionnaire. The results of this Randomization Study (see Appendix E for full details) support the latter view, i.e. the observed differences are inherent to the participants rather than a methodological artifact of the instruments.

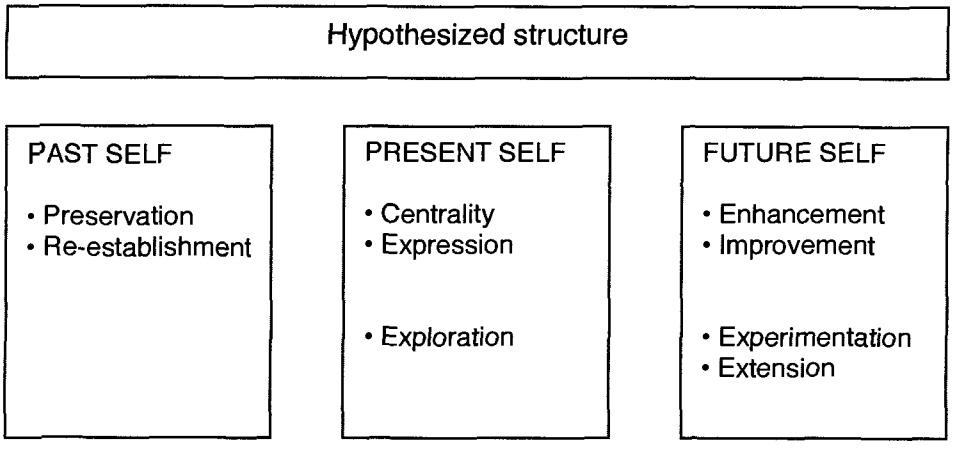


Figure 1. Hypothesized temporal domains of self-related dimensions.

Self-Continuity Interview

Participants' reasoning about self-continuity was assessed through a semi-structured interview (Chandler et al., 2003). Specifically, participants were initially asked about how the protagonists in two stories (Jean Valjean from *Les Miserables*, and Rhpisunt from the First Nations tale of Bear Woman) manage to remain the self-same individual despite dramatic change over the course of the story. Then they were asked about themselves and how they are still the same person they were five years ago, despite changes that have occurred in their own lives. Transcriptions of these interviews are then coded for the self-continuity warranting strategy employed (as outlined in Appendix A).

Personal Projects Interview

Participants were also asked about their experiences completing the personal projects analysis questionnaire with a particular focus on the self-related dimensions. Specifically, we asked participants to pick one of their eight projects, reminded them of the ratings they had given on the self-related dimensions for that project and invited them to explain and elaborate on why they rated the project the way they did, as well as to comment on the clarity of the dimension descriptions. From this, we hoped to determine how clearly participants differentiated between the various self-related dimensions, and to solicit their suggestions for improving the instrument. These data indicate that participants had little difficulty understanding the dimensions and responding to the items. Those who did indicate some confusion about dimension definitions, often mentioned that they consequently rated the project on the middle point of the scale.

Some found it difficult to provide explicit definitions of the dimensions, while others readily provided explanations that either concurred with our definitions, or were only slightly different. These data will be analyzed fully for further refinement of the self-related dimensions, but are not part of this thesis.

Subjective Well-Being Measures

Life Satisfaction. Subjective well-being has been conceptualized as having both an emotional or affective component (e.g., operationalized as positive and negative affect), and a judgmental or cognitive component (conceptualized as life satisfaction, Pavot, Diener, Colvin, & Sandvik, 1991). The *Satisfaction with Life Scale* (Diener, Emmons, Larsen, & Griffin, 1985), consisting of five items rated on a seven-point scale, is reported to be a valid and reliable measure of life satisfaction (Pavot & Diener, 1993; Pavot et al., 1991; Shevlin, Brunsden, & Miles, 1998).

Positive and Negative Affect. To assess the balance of participant's experience of positive and negative affect during the execution of their personal projects (rather than with their life in general), we used Watson, Clark and Tellegen's (1988) 20-item *Brief Measures of Positive and Negative Affect Scales* (PANAS). PANAS was developed using item selection procedures including principal component analysis of content sortings of a large sample of descriptors, and reliabilities of the final scales are all acceptably high (alpha coefficients range from .84 to .90). Similarly, both convergent and discriminant validity are reported to be satisfactory (Watson et al., 1988).

Personality Measure

To explore relationships of personal project variables and self-continuity indicators with personality characteristics, we included a brief version of the NEO Big Five constructed by John, Donahue, and Kentle (1991). The Big Five Inventory, a 44-item questionnaire with scales for each of the five factors, has alpha reliabilities reported to range from .75 to .90 and average above .80, three-month retest reliabilities ranging from .80 to .90 (M = .85), and validity evidence that includes "substantial convergent and divergent relations with other Big Five instruments as well as with peer ratings" (John & Srivastava, 1999, p. 115).

Procedure

Participants were recruited from within six sections of the same first year Psychology course (Psyc 100A and Psyc 100B). Researchers entered the classrooms and presented information about the study and invited students to participate. They distributed consent forms and paper versions of the PPA questionnaire to interested students as well as handouts providing the internet address of the web questionnaire. Interested students were asked to return the completed paper questionnaire, or to complete the online questionnaire. Paper questionnaires were also available for pick-up outside the Department of Psychology General Office. Students were instructed that they had to complete the personal project questionnaire in order to be eligible for participation in the interview portion of the study, and that space for participation in the interview section of the study was limited.

Drop-off boxes were made available outside the Department of Psychology General Office for completed paper questionnaires. Web-based questionnaires were automatically submitted electronically upon completion. Debriefing information was made available next to the drop-off box, and appeared online after submission of an electronic questionnaire.

For the interview portion of the study, participants signed up for specific time slots using the Psychology 100 Research Participation System web site. Upon arrival in the lab, participants were provided with information required for informed consent, and, if they consented, were interviewed as follows. First, the personal project follow-up interview (PPI) as described above was conducted. Then, they listened to, and answered questions regarding the stories of Jean Valjean and Bear Woman in random order, and were finally asked about their own experience of personal persistence and change within their own lives. With the participants' consent, these interviews were audio-taped for later transcription. At the end of the session, participants were thanked and debriefed. Research participation credit was assigned according to the guidelines for the Psychology 100 Research Participation System.

Design

This study has a one-point assessment design and involves a non-random convenience sample of undergraduate students enrolled in a first-year psychology course. It comprises two sections. The Questionnaire Section (Personal Projects Analysis questionnaire) was completed by all participants (total $N = 389$), of which 148 (38.0%) completed the paper format, and 241 (62.0%) completed the web format. The Interview

Section (Self-Continuity Interview and Personal Projects Interview) was administered to a sub-sample of these participants ($N = 75$; 19.3%).

Data were collected during two time periods (see Appendix D for comparisons between cohorts). All Cohort One participants completed the PPA questionnaire, and a sub-sample of 21 participants also completed the interview portion. All Cohort Two participants completed the PPA, which also included additional items pertaining to subjective well-being and personality at the end of the questionnaire. A sub-sample of 54 participants completed the interview portion. All other procedures were identical at both times of data collection.

In the results section to follow, we begin by comparing the two questionnaire formats (paper and web format) with regard to demographics and our measures, and then examine the interview sub-sample in terms of its comparability to the larger sample from which it is drawn, all before turning to results that pertain to our main research questions. There, data analyses will proceed from structural analysis of the personal project questionnaire data to between-group comparisons with regard to self-continuity warranting strategy, and finally to analyses of the relation of personal projects to the subjective well-being and personality measures.

Results

Initial Analyses

Response Rates

Response rates were computed for the paper questionnaires. A total of 384 questionnaires were distributed in the classrooms, and 18 additional ones were taken from the questionnaires made available for pick-up outside the Department of Psychology General Office. Of the 402 paper questionnaires distributed, 149 (38.8%) were completed and returned. Response rates cannot be computed for the web-based questionnaire.

Excluded and Incomplete Data

A total of 149 students completed the questionnaire in paper format, and 257 completed the web version. From among the paper questionnaires, one person was excluded because of insufficient project descriptions. From the web submissions, 15 participants were excluded because two or more of their projects were rated within a time span of less than one minute, indicating that they were likely clicking on response options at random without reading the instructions or item descriptions. One person submitted both a paper and web questionnaire. For this participant, the data from the paper questionnaire were used in the analysis because it contained more detailed context information than the web submission. Overall, then, data from 389 participants were included in the analysis: 148 paper and 241 web respondents. Seventeen web participants submitted fewer than 8 differing projects due to a technical difficulty that submitted some of their projects twice and prevented them from completing ratings for all their 8 projects.

Of the 17 affected participants, 14 submitted 7 projects, and three submitted 6. The remainder of the web and all paper participants rated a total of 8 personal projects each.

Comparison of Paper and Web Questionnaire Formats

Because participants were free to choose the questionnaire format (web or paper), it is useful to compare the resulting groups in terms of demographic and other data variables.

Demographics. There were no differences in the proportion of women and men completing the two versions, χ^2 (1, N = 389) = 2.02, *ns*, nor in the proportion of web and paper respondents who did or did not go on to complete the interview portion of the study, χ^2 (1, N = 389) = 2.09, *ns* (see Table D2 for a cross-tabulation of the numbers of women and men in each group). Also, no age differences were observed between paper and web respondents, (M = 19.93, SD = 3.87, and M = 19.33, SD = 2.32, respectively, $t(387)=1.93, p < .06$).

Personal project data. A 2 x 2 between-subjects MANOVA was performed on all 29 personal project dimensions as dependent variables. Independent variables were questionnaire format (paper, web), and data collection cohort (Cohort One, Cohort Two). Data collection cohort was included as independent variable in this analysis to prevent any confounding effects, since the two samples included different proportions of web and paper questionnaires.

The total N of 389 was reduced to 382 through exclusion of seven participants with missing scores for Project Stage. Means and standard deviations for the combined sample, as well as F statistics for each dimension are displayed in Table D3 (see

Appendix D). Using Wilk's criterion, the combined DVs were significantly affected by both format, $F(29, 350) = 2.57, p < .001$, and data collection cohort, $F(29, 350) = 2.49, p < .001$, but not by their interaction, $F(29, 350) = 1.42, p = .08$.

By Wilk's criterion for Type I error protection, interpretation of univariate results is warranted for each dimension for the main effects of format and data collection cohort only. Differences for data collection cohort are discussed in Appendix D. With regard to format, paper respondents show consistently higher project ratings on 14 dimensions. Specifically, they show higher scores on the project dimensions *Difficulty*, *Initiation*, *Value-congruency*, *Challenge*, *Absorption*, *Community-Culture*, *Centrality*, *Expression*, *Enhancement*, *Experimentation*, *Exploration*, *Extension*, *Improvement*, and *Re-establishment* (compare Appendix D, Table D3). In terms of effect size, the multivariate effect for format reflects a moderate association with the combined DVs, partial $\eta^2 = .18$. The univariate effects for the significant dimensions regarding format are small and range from partial $\eta^2 = .01$ to .03.

The results of the randomization study (see Appendix E) allow us to conclude that these effects arise not from differences in the questionnaire format per se, but rather from the ways in which participants who choose one format over the other make use of the rating scales. Therefore, we have not controlled for questionnaire format in our subsequent analyses.

Comparison of Interview Sub-Sample with Total Sample

Once participants had completed the questionnaire, they were free to sign up for the interview portion of the study. There were no other restrictions on who could or could

not sign up for the interview portion. Still, it is important to evaluate the representativeness of this sub-sample with reference to the larger sample from which it was drawn.

There were no differences in the proportion of women and men participating in the interview portion, χ^2 (1, N = 389) = .64, *ns*, nor in the proportion of web and paper respondents who did or did not complete the interview portion of the study, χ^2 (1, N = 389) = 2.09, *ns* (see Table D1 for a cross-tabulation of the numbers of interview participants in each group). However, interview participants were on average 17 months older than those who only completed the questionnaire portion of the study, M = 20.85, SD = 5.72, and M = 19.25, SD = 1.75, respectively, t(77.32) = 2.40, p < .05. This finding is likely the result of the fact that a few of the very oldest of the students in Psychology 100 elected to participate in the interview portion of the study. The oldest participant in the non-interviewed sample was aged 30 years. When the four participants in the interview group above this age are removed (i.e., those aged 33, 35, 44 55), the mean difference in age is no longer statistically significant. Also, no differences in personal project ratings were observed between interviewed and non-interviewed participants (see Appendix F).

Scoring of Personal Projects Questionnaire Data

The personal projects were categorized according to content into one of seven categories: (1) Academic/Occupational, (2) Health/Appearance, (3) Interpersonal, (4) Intrapersonal, (5) Leisure, (6) Administrative/Maintenance, and (7) a final category of "other". This category system was developed by Little and colleagues (1994; see

Appendix C for category descriptions). Content categorization began with a training phase, in which nine sets of randomly selected projects (each set comprising about 1% of the total number of projects) were categorized by two judges one set at a time, and diverging judgments were discussed after each round. Then, for the Cohort One data, both judges categorized all projects resulting in an overall agreement rate of 91.3% (149 disagreements out of 1720 projects), and a Kappa of .89, $p < .001$. For the Cohort Two data, each judge categorized 55% of all projects, resulting in categorization of 10% of all projects by both judges. Overall agreement rate for these projects was 92.7% (11 disagreements out of 150), and a Kappa of .92, $p < .001$. All disagreements were resolved through discussion, and categorizations were revised accordingly.

Scoring of Self-Continuity Interview Data

The interview transcripts were scored according to a procedure and coding scheme outlined in detail in Chandler et al. (2003) resulting in classification of each participant's response style as either Essentialist or Narrative (track 1 or 2), and a level of sophistication ranging from 1 to 5 (see Appendix A). Generally, *Essentialist* strategies aim to "vouchsafe personal persistence by identifying some aspect of self or other that stands apart from time" (p. 29), while each level differs in terms of how abstract or substantive this entity or essence is. *Narrative* accounts embrace change, rather than dismiss it, and attempt to serialize it in one way or another into a system of followable meanings. The different levels of narrative accounts, then, differ in their assumptions about the nature of the connections between the various episodes making up the life story (Chandler et al., 2003). All transcripts were coded by the author's supervisor, and a

random sample of 12 transcripts (16%) was also coded by a second trained rater. The judge agreement rate for track of self-continuity reasoning was 83.3% (10 of 12 transcripts). Of the 10 transcripts with identical track ratings, six (60%) were also given identical ratings with regard to level of sophistication, while 4 (40%) were assigned level ratings that differed by one level. For the two transcripts with different track ratings, one had a level rating that differed by one level, and one by two levels. Scoring disagreements were resolved through discussion.

Structural Analyses

To examine the factor structure underlying the personal project variables, and to combine dimensions into factor scores for subsequent analyses, we performed principal component analyses (PCA) with varimax rotation on both the participant and project level. For analysis on the participant level, ratings of the eight projects were averaged across participants for each of the 29 dimensions, so that analyses were performed on an overall *N* of 389. Mean dimension ratings are presented in Appendix G, along with normality indicators and tests. On the project level, each project was entered as unit of analysis, yielding an overall *N* of 3092. Results on both levels will be presented and compared. On each level, the first factor analysis included what we refer to as *traditional* dimensions (i.e. the core dimensions typically employed by Little and colleagues, although we included Distractibility, Commitment, and Community/Culture in that group as well). These traditional dimensions can be conceptually aligned into five factors: Meaning, Structure, Community, Efficacy, and Stress (Little, 1989, 1998,1999a; compare Table 1), but there is mixed evidence for this structure empirically. In a second factor

analysis, only the nine newly added self-related dimensions were included. Relationships between the traditional factors and self factors resulting from these analyses are then examined using Pearson-correlations. As well, a factor analysis including all 29 project dimensions was performed on the participant level, as another way to explore the structural features and relationships between the two conceptual domains of traditional and self related dimensions. For the truly curious, an intercorrelation table including the total of 29 personal project dimensions is presented in Appendix H.

Structural Analyses on the Participant Level

Principal component analysis of traditional dimensions. Using the Eigenvalue greater than one criterion results in a five factor solution explaining 61.19% of the variance. Table 2 displays the initial Eigenvalues and percentage of explained variance.

Table 2
Initial Eigenvalues of five-factor solution: 20 traditional rating dimensions (N = 389)

	Initial Eigenvalues		
Component	λ_i	% of Variance	Cumulative %
1	5.13	25.64	25.64
2	3.18	15.90	41.55
3	1.49	7.44	48.98
4	1.37	6.84	55.82
5	1.07	5.37	61.19

Factor analyses were performed using pairwise exclusion of participants with missing data. There were 7 missing data points, all of which occurred with regard to the dimension Project Stage. Because one of these participants has been interviewed and classified as Narrativist (which are rare and hence precious), we decided not to exclude them from the analyses. The initial factor solution was rotated orthogonally, and

regressed factor scores were saved for subsequent analyses. Table 3 displays the factor loadings, sorted by size.

Factor 1, comprising the three Stress dimensions (Difficulty, Stress, and Challenge) as well as Negative impact, is a very clear Stress factor. *Factor 2* comprises the Efficacy related dimensions Project Stage and Progress, the two dimensions Commitment and Distractibility, as well as the traditional Meaning dimensions Absorption and Importance. In addition, Enjoyment loads highly on this factor, although it is assigned to Factor 3. This factor called Efficacious Involvement seems to capture agentic dimensions of efficacious pursuit of personally meaningful projects. *Factor 3* comprises the remaining Meaning dimensions of Enjoyment, Self-identity and Value-congruency, as well as the new Community/Culture dimension. Self-identity and Value-congruency appear to be the more value laden, identity carrying aspects of personal meaning, and it is encouraging that these dimensions capturing personal meaning covary with the dimension Community/Culture. We named this factor of particular theoretical interest Identity/Culture. It appears to capture those aspects of a person's personal project system that express the connection between personal identity and meaning to communal identity and social meanings, and may thus capture important differences between Essentialists and Narrativists. *Factor 4* comprises all three Community dimensions, and is hence a clear Community factor. *Factor 5* comprises both traditional Structure dimensions—Control and Initiation, as well as the Efficacy dimension Outcome, and will be referred to as Structure.

It is noteworthy, that this factor structure is largely congruent with Little's conceptual five factors of Meaning, Community, Structure, Efficacy, and Stress. In

Table 3

Factor loadings of five-factor solution: 20 traditional rating dimensions (N = 389)

	Traditional Factors				
Traditional Dimensions	1 Stress	2 Efficacious Involvement	3 Identity/ Culture	4 Community	5 Structure
Difficulty (SE)	**.82**	-.09	.18	.00	-.12
Stress (SE)	**.80**	.03	-.15	.15	-.14
Challenge (SE)	**.79**	.09	.32	.06	-.02
Negative impact (SU)	**.46**	-.12	-.18	.08	-.14
Distractibility	.16	**-.73**	.01	-.07	.08
Progress (E)	-.24	**.64**	.27	.30	.12
Commitment	.22	**.59**	-.01	.17	*.43*
Project Stage[a]	.02	**.55**	.17	.19	.04
Absorption (M)	.32	**.52**	.36	.19	.02
Importance (M)	.48[b]	**.52**	.08	.12	.25
Self-identity (M)	.02	.16	**.73**	.08	.21
Value-congruency (M)	.16	.18	**.71**	.23	.15
Community/Culture	.03	-.01	**.67**	.26	-.12
Enjoyment (M)	-.26	.47[b]	**.57**	.06	.13
Support (C)	-.07	.15	.20	**.76**	.08
Others' View of Importance (C)	.23	.21	.14	**.76**	.02
Visibility (C)	.23	.27	.19	**.71**	.07
Control (SU)	-.31	-.01	-.03	.14	**.78**
Initiation (SU)	.01	-.02	.36	-.16	**.73**
Outcome (E)	-.21	.36	.03	.22	**.65**
Rotation sums of squared loadings	2.96	2.71	2.46	2.12	1.99
% of Variance	14.80	13.54	12.30	10.58	9.97
Cumulative %	14.80	28.34	40.64	51.21	61.19

Note. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; E = Efficacy; M = Meaning; C = Community. Principal component analysis was performed using pairwise exclusion and Varimax rotation. Dimensions are ordered by size of loadings, and the highest loading of each dimension is italicized on the corresponding factor.

[a]For Stage only, *N* was 382 due to seven participants having missing values. [b]Second highest loading of this dimension is less than .10 lower than its highest loading.

particular, all Stress and Community dimensions build a factor each, and the two main Structure dimensions also cluster together. An interesting deviation from the conceptualized structure is observed with the Meaning and Efficacy dimensions.

In the current solution, Little's five Meaning dimensions split into two factors. Self-identity and Value-congruency, arguably reflecting a person's innermost standards and characteristics, as well as Enjoyment load on Factor 3, together with the new Community/Culture dimension. The two remaining Meaning dimensions, Importance and Absorption, on the other hand, cluster with the Efficacy dimension Progress and with Project Stage, and the additional dimensions Commitment and Distractibility on Factor 2. Enjoyment also loads highly on Factor 2, thus reflecting a connection between the Identity/Culture factor and Efficacious Involvement. Importance loads almost equally high on the Stress factor. We will expand on the possible implications of this factor structure in the discussion section.

Principal component analysis of self-dimensions. A second exploratory factor analysis including the nine self-related dimensions was performed to investigate their relationships more closely. Overall, intercorrelations among all self-related dimensions ranged from medium (.49) to very high (.83; see Appendix H). These high intercorrelations are also reflected in the factor analysis. Applying the Eigenvalue greater than one criterion results in a one-factor solution explaining 69.62% of the variance (see Appendix I, Table I1 for factor loadings). However, to examine the more subtle structure of these factors we elicited 2, 3, and 4 factor solutions (see also Table I1) and compared them in terms of the conceptualized temporal dimensions as outlined in Figure 1. Based on the pattern of results, we selected the four-factor solution for all further calculations

because of its potential to reveal a more detailed picture of the conceptual relationships of interest. Table 4 presents the initial Eigenvalues of the four-factor solution, and Table 5 lists the factor loadings.

Table 4
Initial Eigenvalues of four-factor solution: 9 self-related dimensions (N = 389)

	Initial Eigenvalues		
Component	λ_i	% of Variance	Cumulative %
1	6.27	69.62	69.62
2	.61	6.77	76.39
3	.51	5.61	81.99
4	.44	4.90	86.89

Table 5
Factor loadings of four-factor solution: 9 self-related dimensions (N =389)

	1	2	3	4
Temporal Aspect Self Dimension	Future-Other	Present	Future-Better	Past
Present self				
Centrality	.30	**.82**	.24	.28
Expression	.44	**.71**	.26	.31
Exploration	**.77**	.38	.25	.31
Past self				
Preservation	.27	.25	.19	**.87**
Re-establishment	.25	.35	.45	**.62**
Future self				
Improvement	.32	.20	**.85**	.25
Enhancement	.37	.50	**.62**	.25
Experimentation	**.86**	.24	.29	.18
Extension	**.67**	.39	.34	.36
(Rotation) Sums of Squared Loadings	2.42	2.01	1.72	1.68
% of Variance	26.87	22.30	19.08	18.65
Cumulative %	26.87	49.17	68.25	86.89

Note. The highest loading of each dimension is italicized on the corresponding factor.

The hypothesized temporal alignment (Figure 1) was confirmed for the dimensions associated with *past self* (Preservation and Re-establishment, Factor 4). The dimensions

associated with the *future self*, however, do not form a single factor, but split into two subgroups: Experimentation and Extension on the one hand (Factor 1), Enhancement and Improvement on the other (Factor 3). While the first subgroup represents efforts to develop a *different* self (hence we call it Future-Other), the latter specifies change towards a qualitatively *improved* self (i.e. Future-Better). From the three dimensions hypothesized to make up the *present self*, only Centrality and Expression relate strongly with each other, while Exploration groups with Experimentation and Extension to build the Future-Other factor (see Figure 2).

Overall, these results support the intended conceptual differentiation with respect to the temporal aspects of self-functions from a structural point of view. Whether it is really these temporal notions that lead to the observed empirical relations between these dimensions, or some other aspect that groups the dimensions in this way, is open to further theorizing. Because of the high correlations between self dimensions and because some of the dimensions in the four factor solution still load fairly highly on more than one factor, we performed a subsequent factor analysis using oblique rotation to allow the factors to correlate with each other. Using this approach resulted in an identical solution in terms of the dimensions that build factors, and had reduced cross-factor loadings. For ease of interpretation, however, we retained the orthogonal factor solution.

Relationship between traditional and self-related dimensions. Correlations between the regressed as well as unit-scaled traditional factors (Table 3) and self factors (Table 5) were calculated to capture the structural relationships between these sets of constructs (see Table 6). Unit-scaled factor scores were calculated by averaging the participant's score on all dimensions which have their highest loading on a given factor.

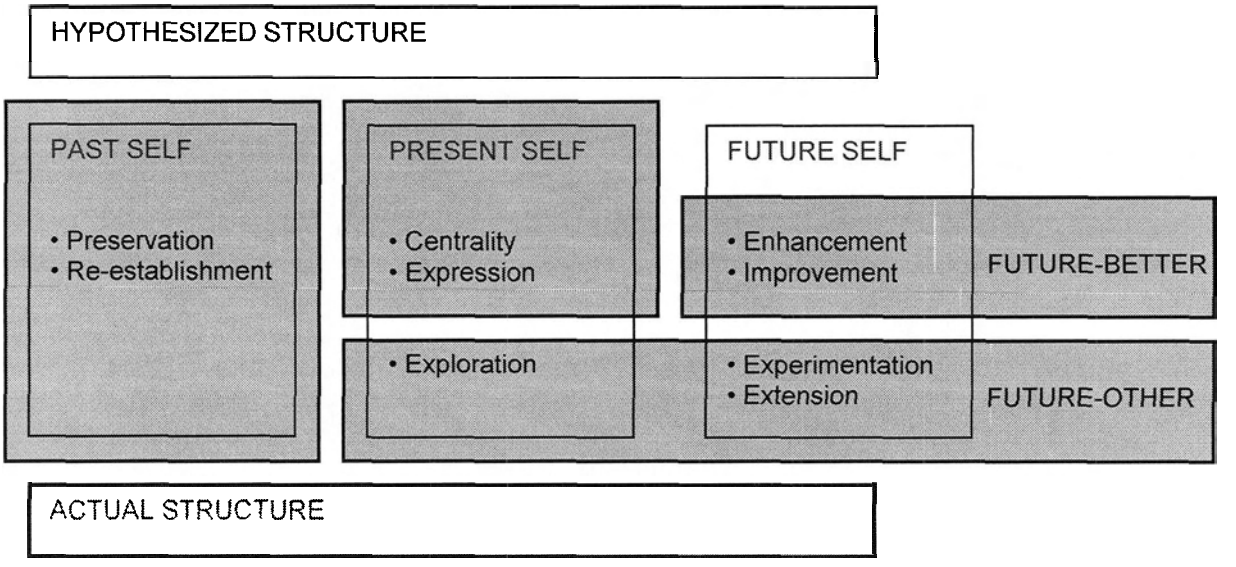


Figure 2. Hypothesized and actual structure of self-related dimensions. The hypothesized structure as presented in Figure 1 is overlapped by the actual structure (grey boxes).

Table 6

Pearson-correlations between regressed and unit-scaled factor scores on the participant level: Five-factor solution of traditional dimensions with four-factor solution of self-dimensions

	Self Factors			
	1	2	3	4
Traditional Factors	Future-Other	Present	Future-Better	Past
Regressed Factor scores ($N = 382$)[a]				
1: Stress	.29***	.12*	.09^	.03
2: Efficacious Involvement	.11*	.18***	-.02	.13*
3: Identity/Culture	.21***	.55***	.25***	.24***
4: Community	.04	.13**	.04	.14**
5: Structure	-.14**	.07	.07	-.04
Unit-scaled Factor scores ($N = 389$)				
1: Stress	.37***	.27***	.23***	.23***
2: Efficacious Involvement	.36***	.44***	.33***	.33***
3: Identity/Culture	.53***	.71***	.55***	.56***
4: Community	.33****	.40***	.31***	.31***
5: Structure	-.01	.11*	.11*	.05

[a]Seven participants had missing regression scores due to missing values for the dimension Project Stage.

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$

Differential relationships appear more clearly when looking at regressed factor scores, since they are orthogonal, as compared to the unit-scaled factors, some of which are highly correlated within factor domains (see Tables J1 and J2, Appendix J). The traditional factor Identity/Culture is the only one relating to all self factors, indicating that participants who rate their projects as high on Identity/Culture, have projects that also serve all self functions, be they past-, present-, or future-self related. The relationship between Identity/Culture and Present self-aspects is the strongest with a large correlation, while the other relationships are in the moderate and small range. The strongest association of the Stress factor is a moderate relationship with Future-Other, implying that participants dedicating their projects to trying out new ways of being exhibit higher stress levels. Future-Other projects are the only ones to relate—in this case

negatively—to Structure. This makes intuitive sense, as projects serving experimental purposes would be expected to be less well structured which may in turn make them more stressful.

Efficacious Involvement has its strongest association with the Present self factor, and shows small correlations with the Past and Future-Other self factor as well. Community is selectively associated with Present and Past self aspects only, and these correlations are small. From Little's conceptual five-factor structure, our traditional factors 2 and 3 include the Meaning dimensions, and factor 4 includes the Community dimensions. It is interesting that these three are the factors related to Past self aspects which could be argued to be particularly important for self-continuity. It is especially encouraging to see the Identity/Culture factor so strongly associated with all self factors, even if it may be expected and hence 'just' interpreted as evidence for convergent validity.

The relationship between Identity/Culture and Future-Other, in particular, is interesting from a theoretical point of view. How can something that is not yet realized (Experimentation, Exploration, and Extension being the main dimensions loading on Future-Other) carry personal and cultural meaning? There seems to be some sort of potential, projected sense of identity contained in the realm of possibilities of future and possible selves (compare Markus & Nurius, 1986; Markus & Ruvolo, 1989). Another way to look at it is that where one's identity is rooted, is also the starting point for future developments and experiments.

Looking at the unit-scaled factor scores, it is important to keep in mind that they are intercorrelated. All save one pair of traditional factors is intercorrelated with

correlations ranging from small (.11) to large (.53) (see Table J1, Appendix J), while all self factors are highly correlated (.71 to .79; see Table J2). Nevertheless, although the correlations between these two sets of constructs show less selective associations (bottom half of Table 6), the pattern of relationships observed with the regressed scores also shows the strongest association between the Identity/Culture factor and all temporal self functions (all large correlations), while Stress, Efficacious Involvement, and Community are moderately associated with the set of self factors, and Structure exhibits small correlations with Present and Future-Better only.

Principal component analyses with all 29 dimensions on the participant level. To examine the interrelations between our set of traditional and self related dimensions further, we also performed a factor analysis in which all 29 project dimensions were included. The aim of this analysis was to determine whether the set of traditional factors and self factors are replicated as separate factors, or whether the self factors cluster with various traditional dimensions to form new factors. Based on the fairly high intercorrelations observed with the self-related dimensions, however, it is expected that they will form one factor. Using the Eigenvalue greater than one criterion results in a seven factor solution explaining 68.77% of the variance. Table 7 displays the initial Eigenvalues and percentage of explained variance, Table 8 displays the factor loadings, sorted by size.

Table 7
Initial Eigenvalues of seven-factor solution: 29 dimensions (N = 389)

	Initial Eigenvalues		
Component	λ_i	% of Variance	Cumulative %
1	9.27	31.96	31.96
2	3.59	12.36	44.33
3	2.41	8.30	52.63
4	1.43	4.92	57.54
5	1.15	3.97	61.51
6	1.06	3.66	65.16
7	1.05	3.61	68.77

The data in Table 8 reveal that the self factors do, in fact, load on a single factor (*Factor 1*), and the traditional factors elicited in the separate component analysis (see Table 3) are largely replicated. The factors Community (*Factor 4*) and Structure (*Factor 5*) comprise the exact same dimensions, and Efficacious Involvement (*Factor 2*) comprises all its previous dimensions plus Enjoyment. The variations in dimension assignment to factors occur with regard to Negative impact which split from the Stress factor and forms a separate factor (*Factor 7*), and—of higher theoretical interest in this context—with regard to the Identity/Culture factor. In our earlier analyses (Table 3), this factor was formed by the dimensions Self-identity, Value-congruency, Community/Culture, and Enjoyment, and as such was suggested to build a nexus between personal and communal identity and meaning. In the current solution with all 29 dimensions, Self-identity and Value-congruency build a separate factor capturing personal meaning (*Factor 6*), while the Community/Culture dimension is the only dimension from our set of 'traditional' dimensions to cluster with the nine self dimensions (*Factor 1*). However, the second highest loading of this dimension is only marginally lower than the highest (.46 vs. .50), and is on the Identity factor. In addition, the Present self dimensions of Expression and particularly Centrality also have

Table 8

Factor loadings of seven-factor solution: 29 project dimensions (N = 389)

	Self/ Culture	Efficac. Involv.	Stress	Comm.	Structure	Identity	Negative impact
	1	2	3	4	5	6	7
Exploration (S)	**.85**	.15	.18	.08	-.05	.06	-.01
Extension (S)	**.85**	.17	.18	.08	-.02	.14	-.01
Experimentation (S)	**.83**	.04	.22	.02	-.10	-.05	-.04
Enhancement (S)	**.81**	.08	.16	.07	.12	.19	-.17
Expression (S)	**.80**	.10	.07	.12	.07	.29	-.03
Improvement (S)	**.80**	-.01	.11	.12	.10	-.04	-.10
Re-establishment (S)	**.78**	.02	.01	.08	.00	.16	.14
Preservation (S)	**.73**	.18	-.06	.10	.02	.14	.18
Centrality (S)	**.71**	.17	.18	.13	-.04	.43	-.05
Community/Culture	**.50**	-.02	-.10	.22	-.06	.46[a]	.08
Distractibility	.04	**-.69**	.02	-.06	.22	-.13	.41
Progress (E)	.23	**.67**	-.31	.27	.17	.11	.09
Commitment	.03	**.59**	.34	.15	.27	.11	-.21
Project Stage[b]	.18	**.57**	-.06	.19	.10	.00	.22
Absorption (M)	.46[a]	**.52**	.22	.17	.05	.06	.16
Importance (M)	.09	**.50**	.50[a]	.13	.15	.15	.04
Enjoyment (M)	.39[a]	**.44**	-.24	.07	.19	.27	-.26
Difficulty (SE)	.24	-.16	**.80**	.07	-.16	.05	.05
Challenge (SE)	.39	.03	**.75**	.10	-.03	.06	.07
Stress (SE)	.10	.03	**.68**	.14	-.19	-.12	.42
Support (C)	.21	.12	-.03	**.79**	.08	.04	-.25
Others' View of Importance (C)	.13	.22	.21	**.76**	-.02	.14	.04
Visibility (C)	.16	.30	.16	**.70**	.05	.18	.17
Control (SU)	-.09	.09	-.24	.11	**.81**	-.05	-.03
Initiation (SU)	.12	.01	.10	-.13	**.75**	.28	-.12
Outcome (E)	.00	.43	-.14	.16	**.60**	.06	-.09
Self-identity (M)	.24	.18	-.02	.07	.19	**.78**	.05
Value-congruency (M)	.37	.15	.16	.23	.11	**.69**	-.10
Negative impact (SU)	-.04	-.01	.24	-.05	-.18	.04	**.74**
Rotation sums of squared loadings	6.95	2.87	2.68	2.14	2.00	1.98	1.33
% of Variance	23.96	9.88	9.25	7.39	6.88	6.82	4.60
Cumulative %	23.96	33.83	43.09	50.48	57.36	64.17	68.77

Note. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; E = Efficacy; M = Meaning; C = Community. Effic. Involv. = Efficacious Involvement; Comm. = Community. Principal component analysis was performed using pairwise exclusion and Varimax rotation. Dimensions are ordered by size of loadings, and the highest loading of each dimension is italicized on the corresponding factor.

[a]Second highest loading of this dimension is less than .10 lower than its highest loading.[b]For Stage only, *N* was 382 due to seven participants having missing values.

interpretable loadings on the Identity factor (using the criterion of interpreting loadings of .30 or higher, Tabachnik & Fidell, 2001). Similarly, Value-congruency has its second highest loading (.37) on the Self/Culture factor, thus providing—together with Community/Culture, Centrality, and to a lesser extent Expression—a nexus through which the traditional identity and value related Meaning dimensions (Self-identity and Value-congruency) relate to our present, past, and future oriented self functions. The fact that this interconnection rests most strongly on the Community/Culture dimension, underscores Chandler et al.'s (2003) proposal that cultural continuity provides a safety net in times when identity-related issues are particularly demanding.

Community/Culture, Absorption, Importance, and Enjoyment also load on two factors in similar fashion. All three are assigned to the Efficacious Involvement factor (*Factor 2*), but Absorption and Enjoyment also relate to the Self/Culture factor (*Factor 1*), and Importance also relates to the Stress factor (*Factor 3*).

Structural Analyses on the Project Level

Principal component analysis of traditional dimensions. In this particular study, it seemed useful to examine the factor structure on the project level as well, since it is possible that unique information is lost when project ratings are averaged across all 8 of the projects that individual participants reported. A close relation between factor structures on the project and participant level would indicate that participants use, on average, all their projects in similar ways, rather than having subgroups of projects which serve varying purposes. Using the Eigenvalue greater than one criterion results in a five factor solution explaining 58.55% of the variance. Table 9 displays the initial

Eigenvalues and percentage of explained variance.

Table 9
Initial Eigenvalues of five-factor solution on the project level: 20 traditional rating dimension (N ranges from 3018 to 3090)

	Initial Eigenvalues		
Component	λ_i	% of Variance	Cumulative %
1	4.71	23.53	23.53
2	3.28	16.38	39.91
3	1.39	6.95	46.86
4	1.26	6.29	53.15
5	1.06	5.29	58.44

Factor analyses were performed using pairwise exclusion of participants with missing data. With the exception of Project Stage (which had a missing *N* of 74), missing values per dimension ranged from 2 to 6, resulting in an overall *N* of 3018 to 3090. The initial factor solution was rotated orthogonally, and regressed factor scores were saved for subsequent analyses. Table 10 displays the factor loadings, sorted by size.

Interestingly, the resulting factor solutions on the project and participant level are remarkably similar. Although this might be expected, it is not always the case (Little, 1988). The factors Stress (2), Identity/Culture (3), and Community (4) are completely identical on the project level and participant level, while the Structure factor (5) now comprises only the two core Structure components, Control and Initiation, due to Outcome loading on Efficacious Involvement. The factor Efficacious Involvement from the participant level solution (see Table 3) retains all its dimensions, with the addition of the Efficacy dimension Outcome, which also loads almost as highly, but negatively, on the Stress factor, and relatively highly on Structure. Thus, on the project level, the projects one commits to and gets absorbed in (Factor 1) are likely the ones for which the

Table 10
Factor loadings of five-factor solution on the project level: 20 traditional rating dimensions (N ranges from 3018 to 3090)

	Traditional Factors				
Traditional Dimensions	1 Efficacious Involvement	2 Stress	3 Identity/ Culture	4 Community	5 Structure
Commitment	**.71**	.06	.18	.17	.03
Project Stage	**.66**	.00	-.06	.11	.15
Progress (E)	**.64**	-.22	.08	.22	.23
Absorption (M)	**.63**	.26	.27	.17	.03
Distractibility	**-.62**	.22	-.25	-.04	.33
Importance (M)	**.58**	.39	.10	.20	.01
Outcome (E)	**.47**	-.39[a]	.05	.17	.35
Challenge (SE)	.09	**.81**	.14	.08	-.04
Difficulty (SE)	-.15	**.79**	.10	-.01	-.12
Stress (SE)	.04	**.79**	-.20	.18	-.10
Negative impact (SU)	.18	**.44**	-.32	.09	-.01
Value-congruency (M)	.20	.13	**.69**	.26	.16
Self-identity (M)	.24	-.04	**.63**	.11	.28
Community/Culture	.01	-.01	**.58**	.32	-.13
Enjoyment (M)	.37	-.42	**.55**	-.05	.01
Others' View of Importance (C)	.14	.17	.14	**.79**	-.03
Support (C)	.19	-.03	.21	**.72**	-.02
Visibility (C)	.31	.16	.07	**.68**	.04
Control (SU)	.11	-.35	-.02	.09	**.74**
Initiation (SU)	.10	.05	.39	-.20	**.66**
Rotation sums of squared loadings	3.16	2.95	2.08	2.07	1.43
% of Variance	15.79	14.75	10.41	10.33	7.16
Cumulative %	15.79	30.54	40.94	51.28	58.44

Note. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; E = Efficacy; M = Meaning; C = Community. Principal component analysis was performed using pairwise exclusion and Varimax rotation. The highest loading of each dimension is italicized on the corresponding factor.

[a]Second highest loading on this dimension is less than .10 lower than its highest loading.

owners have high expectations for positive completion, they are low in stress (Factor 2), and are well structured (Factor 5).

Comparison and Conclusion. As commented on at the participant level, it is encouraging that the identity and value related Meaning dimensions (Self-identity and Value-congruency) form a factor together with our newly added Community/Culture dimension, which is replicated on the project level. This is a promising piece of evidence in terms of conceptual relationships proposed between the achievement of personal and cultural continuity. As well, the fact that its second highest loading of a moderate strength is on the Community factor (4), provides empirical evidence for the validity of this dimension as community related, yet also distinct from the dimensions comprised in the Community factor.

This project level factor solution, and to a large extent the participant level one, represent a very close match to Little's conceptual factor structure. The only important and very interesting deviation from the conceptual structure as outlined in Table 1 is with regard to the splitting of the Meaning dimensions into two factors—Importance and Absorption on the one hand, and Value-congruency, Self-identity, and Enjoyment on the other. As in earlier studies (e.g., Brandstätter, 2001), Enjoyment, possibly due to its strong affective component, functions as a cross-cutting Meaning dimension, as it loads also fairly highly on Factor 1 (Efficacious Involvement) and Factor 2 (Stress), in addition to its highest loading on Factor 3 (Identity/Culture).

Whether the split in Meaning dimensions only came about because of the additional dimensions included in this study (Distractibility, Commitment, and Community/Culture), was a question we wanted to test. However, excluding these

dimensions from a factor analyses on the project level, still yields a splitting of the Meaning dimensions into those associating with the efficacy related dimensions of Progress, and Project Stage (Importance and Absorption), and the more identity related ones (Self-identity, and Value-congruency) which form a separate factor together with Enjoyment. To a large extent, we observe the same pattern on the participant level, where Self-identity, Value-congruency, and Enjoyment also yield a separate factor, and Absorption builds a factor with Progress and Project Stage, while Importance has a fairly high (.41) yet slightly lower loading on this factor (Efficacious Involvement) than it has on the Stress factor (.47). Before examining the interrelations of traditional and self-related dimensions as a final test of structural equivalency on project and participant levels, we turn to an examination of the structure of the self dimensions on the project level.

Principal component analysis of self-dimensions. An exploratory factor analysis including the nine self-related dimensions was also computed on the project level. As on the participant level, the intercorrelations among all self-related dimensions ranged from medium (.31) to high (.71). Applying the Eigenvalue greater than one criterion results in a one-factor solution explaining 56.93% of the variance (see Table J2 for factor loadings). Again, we examined the more subtle structure by computing 2, 3, and 4 factor solutions (see also Table J2) and compared them in terms of the conceptualized temporal dimensions as outlined in Figure 1. Table 11 presents the initial Eigenvalues of the four-factor solution, and Table 12 the factor loadings.

Table 11
Initial Eigenvalues of four-factor solution on the project level: 9 self-related dimensions (N ranges from 3088 to 3092)

	Initial Eigenvalues		
Component	λ_i	% of Variance	Cumulative %
1	5.12	56.93	56.93
2	.93	10.28	67.22
3	.68	7.55	74.77
4	.56	6.16	80.93

Table 12
Factor loadings of four-factor solution of 9 self-related dimensions on the project level (N ranges from 3088 to 3092)

Temporal Aspect Self Dimension	1 Future-Other	2 Present	3 Past	4 Future-Better
Present self				
Centrality	.23	**.80**	.28	.19
Expression	.34	**.82**	.18	.12
Exploration	**.79**	.36	.23	.16
Past self				
Preservation	.23	.19	**.88**	.12
Re-establishment	.11	.36	**.62**	.38
Future self				
Improvement	.32	.15	.23	**.86**
Enhancement	.32	**.56**[a]	.21	.56[a]
Experimentation	**.86**	.18	.04	.23
Extension	**.74**	.27	.29	.24
(Rotation) Sums of Squared Loadings	2.35	2.04	1.50	1.39
% of Variance	26.10	22.70	16.70	15.43
Cumulative %	26.10	48.80	65.50	80.93

Note. The highest loading of each dimension is italicized on the corresponding factor.
[a]Enhancement loads with about equal strength on Factor 2 (.563), and on Factor 4 (.560).

Similarly to the solutions for the traditional dimensions, the factor solution of the self-related dimensions are also highly congruent across the two levels of analysis, the participant (Table 5) level and the project level (Table 12). The only deviation observed in this solution as compared to the participant level is that Enhancement loads with about equal strength on two factors, the factor Present self (2) and Future-Better (4). Since the

loading on the factor Present is slightly higher (.563) as compared to the one on Future-Better (.560), it is assigned to the Present factor, leaving the Future-Better one with a single dimension, Improvement, only.

In summary, both the project level factor structure of the traditional dimensions and the self dimensions is very similar to the participant level solution. This will allow us to omit further analyses on both levels, and instead concentrate on the participant level, since that is the one more frequently employed in the literature and has also fewer methodological implications in terms of dependent data (i.e. eight projects per person), and variations in *N* due to missing data (on the participant level, only the dimension Project Stage has missing data, while on the project level some missing data are observed for most dimensions).

Relationship between traditional and self-related dimensions. Correlations between the regressed and unit-scaled factor scores resulting from the factor analyses of traditional dimensions (Table 10) and self-related dimensions (Table 12) were calculated to capture the structural relationships between these sets of constructs on the project level and compare them to those on the participant level. The correlations are displayed in Table 13.

Table 13

Pearson-correlations between regressed and unit-scaled factor scores: Five-factor solution of traditional dimensions with four-factor solution of self-dimensions on the project level

	Self Factors			
	1	2	3	4
Traditional Factors	Future-Other	Present	Past	Future-Better
Regressed Factor scores ($N = 2991$)[a]				
1: Efficacious Involvement	.04*	.29***	.10***	-.05**
2: Stress	.18***	-.00	.07***	.15***
3: Identity/Culture	.19***	.52***	.20***	.19***
4: Community	.04*	.10***	.14***	.06**
5: Structure	-.13***	.07***	.01	.09***
Unit-scaled Factor scores ($N = 3090$)				
1: Efficacious Involvement	.23***	.42***	.26***	.15***
2: Stress	.20***	.09***	.10***	.14***
3: Identity/Culture	.38***	.64***	.47***	.28***
4: Community	.23***	.32***	.26***	.21***
5: Structure[b]	.01	.17***	.08***	.08***

[a]Total N of 3092 was reduced by 101 projects due to missing regression scores from pairwise exclusion in factor analyses. [b]N for correlations with Structure was 3089.
*$p < .05$. **$p < .01$. ***$p < .001$

The pattern of results overall is similar to that observed for the participant level (see Table 6). Again, the strongest relationships are observed between the Identity/Culture dimension and the self factors. Relationships of the factor Future-Other are also replicated in their strength, except for a smaller correlation with Efficacious Involvement. For Present self, the relationship to Stress disappeared, while the other relationships kept their respective strengths. For the Past self factor, relationships are also replicated, with the exception that it now also relates to Stress. Future-Better now also relates significantly, although not very strongly, to Stress. As on the participant level, unit-scaled factor scores are intercorrelated since they are non-orthogonal (see Tables J3 and J4).

In summary, the pattern of relationships on the participant level was largely replicated on the project level. The pattern of association for Stress is different, however, in that it related only to Future-Other and Present on the participant level, and does not relate to Present on the project level, but instead relates to Past self and Future-Better in addition to Future-Other. The implications of these results will be taken up in the discussion section.

Conclusion

From the equivalency of factor solutions and correlations between factor domains on the participant and project level, we can conclude that participants, at any given point in time, seem to use their whole project system (as captured in the eight presented and rated projects) in a similar way to achieve meaning and manageability of their projects, as well as to fulfill their desired self-related functions, rather than creating subgroups of projects that serve different or even opposing functions. As well, the traditional and self factors are interrelated in similar ways on both levels.

Distribution of Essentialists and Narrativists

A sub-sample of 75 participants completed the self-continuity interview. Table 14 shows the distribution of Essentialist and Narrativist classifications by level. An uneven distribution of Essentialists and Narrativists is to be expected in samples of mainstream Canadian youth. Chandler et al. (2003) report a ratio of about four Essentialists to one Narrativist in their studies of 12-19 year-olds. In the current sample, a higher proportion of Narrativists was obtained (1 : 1.8). Chandler et al. (2003) have hypothesized that

Essentialist and Narrativist accounts may, in fact, partially merge in later adulthood and this may explain the higher incidence of Narrativist reasoning observed in the current sample.

Table 14
Number of participants by track and level of self-continuity strategy

	Level					Total
Track	I	II	III	IV	V	
Essentialist	1	11	18	14	4	48
Narrative	2	1	6	14	4	27
Total	3	12	24	28	8	75

Although Essentialists were more likely to be scored on levels 2 and 3 (and Narrativists on levels 1, 4, and 5), $\chi^2(4, N = 75) = 9.53, p < .05$, there were no overall differences in the mean self-continuity reasoning levels of Narrativists ($M = 3.63$, $SD = .96$) and Essentialists ($M = 3.19$, $SD = 1.04$), $t(73) = -1.86$, *ns*. Similarly, no age differences were observed between Essentialists, $M = 19.92$, $SD = 2.812$, and Narrativists, $M = 22.52$, $SD = 8.62$, $t(29.15) = -1.52$, *ns*, and level of self-continuity reasoning was not correlated with age, $r = .05$, *ns*.

No gender differences were found in the proportions of men and women classified as using Essentialist or Narrativist self-continuity warranting strategies, $\chi^2(1, N = 75) = 1.03$, *ns*. However, a statistical trend towards a higher proportion of Narrativists among the paper respondents was observed but did not reach conventional significance levels, $\chi^2(1, N = 75) = 3.30, p < .07$.

Group Differences between Essentialists and Narrativists

Comparing Essentialists and Narrativists on Overall Personal Project Ratings

Dimension level. Among the 75 interview participants, 48 were classified as Essentialists and 27 as Narrativists. One-way between subjects ANOVAs were performed with the 29 personal project dimensions as dependent variables, and self-continuity reasoning (Essentialist, Narrativist) as the independent variable. Dimension means and SD by groups, along with F-statistics and effect size are displayed in Table 15. An adjusted alpha level of .025 is used as criterion for significance and interpretation for all subsequent ANOVAs. Univariate effects reveal no significant differences for any of the personal project dimensions (see Table 15).

Factor level. Applying one-way between-subjects ANOVAs to the five traditional *regressed* factors, and the four self factors, does not yield any significant effects for self-continuity reasoning. Applying the same analyses to the *unit-scaled* factor scores, also failed to uncover differences for any of the factors. Table 16 presents means, SD, and test statistics.

Because small but non-significant mean differences are observed on several dimensions (see Table 15) and factors (Table 16), several different alternative analytic strategies were explored. Since personal projects can be classified into one of six content categories, it was possible that Essentialists and Narrativists, while not differing in their overall project ratings, might differ in either the distribution of projects across the six categories, or in their project ratings when analyzed separately by project content category.

Table 15
Means and SD of dimension scores by self-continuity reasoning with test statistics

	Self-continuity reasoning				Total		Statistic	
	Essentialist ($N = 48$)		Narrativist ($N = 26$)[a]		$N = 74$			
	M	SD	M	SD	M	SD	F	η^2
Stress								
Difficulty	6.15	1.45	6.74	1.51	6.36	1.49	2.67	.04
Stress	5.13	1.64	5.10	1.97	5.12	1.75	.01	.00
Challenge	6.25	1.48	6.26	1.70	6.25	1.55	.00	.00
Negative impact	4.16	1.21	3.98	1.81	4.10	1.44	.26	.00
Efficacious Involvement								
Distractibility	5.28	1.43	5.03	1.46	5.19	1.44	.51	.01
Progress	4.98	1.42	5.16	1.47	5.04	1.43	.27	.00
Commitment	7.40	1.24	7.61	1.23	7.48	1.23	.48	.01
Project Stage	5.23	1.03	5.44	.85	5.31	.97	.78	.01
Absorption	5.57	1.27	5.77	1.51	5.64	1.35	.35	.01
Importance	7.86	1.20	7.66	1.02	7.79	1.14	.53	.01
Identity/Culture								
Self-identity	6.08	1.55	6.85	1.47	6.35	1.56	4.34	.06
Value-congruency	7.00	1.74	7.27	1.66	7.09	1.71	.44	.01
Community/Culture	4.83	1.87	5.38	2.43	5.03	2.08	1.20	.02
Enjoyment	5.94	1.24	6.14	1.71	6.01	1.42	.35	.01
Community								
Support	5.64	1.70	5.63	2.02	5.63	1.81	.00	.00
Others' View of Importance	6.35	1.51	6.49	1.97	6.40	1.67	.10	.00
Visibility	5.86	1.73	5.77	1.94	5.83	1.79	.04	.00
Structure								
Control	7.00	1.48	7.09	1.35	7.03	1.43	.08	.00
Initiation	7.92	1.16	7.75	1.33	7.86	1.21	.36	.01
Outcome	7.45	1.25	7.49	1.09	7.46	1.19	.02	.00
Future-Other Self								
Experimentation	5.62	1.66	5.13	2.28	5.45	1.90	1.14	.02
Exploration	5.74	1.50	5.37	2.37	5.61	1.85	.67	.01
Extension	5.92	1.48	5.98	2.17	5.94	1.74	.02	.00
Present Self								
Centrality	5.97	1.65	6.48	1.61	6.15	1.65	1.67	.02
Expression	5.95	1.42	5.90	1.69	5.93	1.51	.02	.00
Future-Better Self								
Improvement	6.59	1.57	6.55	1.84	6.58	1.66	.01	.00
Enhancement	6.91	1.51	6.82	1.88	6.87	1.64	.05	.00
Past Self								
Preservation	5.37	1.52	5.35	1.91	5.37	1.65	.00	.00
Re-establishment	5.44	1.51	5.98	2.20	5.63	1.79	1.54	.02

[a]N for Narrativists is 26 due to one participant with missing values on Project Stage.

Table 16
Means and SD of regressed and unit-scaled factor scores by self-continuity reasoning with test statistics

	Self-continuity reasoning				Total		Statistic	
	Essentialist ($N = 48$)		Narrativist ($N = 27$) [a]		$N = 74$			
Factor	M	SD	M	SD	M	SD	F	η^2
				Regressed Traditional Factors [a]				
1: Stress	.17	.90	.17	1.11	.17	.97	.00	.00
2: Efficacious Involvement	.04	.94	.16	1.25	.08	1.06	.20	.00
3: Identity/Culture	.10	1.12	.48	1.06	.23	1.11	1.98	.03
4: Community	-.20	1.08	-.25	1.21	-.22	1.12	.04	.00
5: Structure	.01	1.11	-.09	.89	-.02	1.03	.14	.00
				Regressed Self Factors				
1: Future-Other	.26	.82	-.22	1.46	.08	1.11	3.29^	.04
2: Present	.03	1.11	.45	1.07	.18	1.10	2.50	.03
3: Future-Better	.12	.95	.11	1.12	.12	1.01	.00	.00
4: Past	.05	1.00	.21	1.06	.11	1.02	.43	.01
				Unit-scaled Traditional Factors				
1: Stress	5.42	1.04	5.51	1.37	5.45	1.16	.09	.00
2: Efficacious Involvement	5.96	.84	6.08	1.01	6.00	.90	.31	.00
3: Identity/Culture	5.96	1.19	6.42	1.44	6.13	1.30	2.24	.03
4: Community	5.95	1.43	5.96	1.58	5.95	1.48	.00	.00
5: Structure	7.46	1.01	7.49	.89	7.47	.96	.02	.00
				Unit-scaled Self Factors				
1: Future-Other	5.76	1.41	5.49	2.10	5.66	1.68	.43	.01
2: Present	5.96	1.44	6.23	1.46	6.05	1.44	.62	.01
3: Future-Better	6.75	1.44	6.66	1.73	6.72	1.54	.06	.00
4: Past	5.41	1.33	5.67	1.80	5.50	1.51	.51	.01

[a] For regressed traditional factors only, N for Narrativists was 26 due to one person having missing values for Project Stage.
^$p < .10$.

Comparing Essentialists and Narrativists on Personal Project Content

Personal projects have been categorized into six content categories: Academic/Occupational, Health/Appearance, Interpersonal, Intrapersonal/Value Concerns, Leisure, and Administrative/Maintenance (see Appendix C for descriptions). Table 17 presents the overall and mean number of projects per category, as well as the number and percentage of participants having at least one project in the category for the overall sample.

Table 17
Mean, SD, range and total number of projects by category and number of participants with at least one project in given category (Total N = 389)

	ACAD	HEAL	INTER	INTRA	LEIS	ADMI
Total *N* of projects	634	442	373	352	557	727
Percent of total projects	20.5	14.3	12.1	11.4	18.0	23.5
Mean number of projects/participant	1.63	1.14	.96	.90	1.43	1.87
SD	1.04	.83	.93	1.16	1.24	1.27
Number of participants having at least one project	352	307	257	202	287	335
Percentage	90.5	78.9	64.1	51.9	73.8	86.1

Note. ACAD = Academic/Occupational; HEAL = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal; LEIS = Leisure; ADMI = Administrative/ Maintenance.

The mean ratings on the 29 dimensions vary widely by project content (see Table 18). The large variation observed in mean ratings across content categories warrants closer examination of possible differences between Essentialists and Narrativists on ratings by content category. Table 19 presents overall and mean number of projects for Essentialists and Narrativists by content category, as well as the number and percentage

Table 18

Mean dimension scores by content category (N by category presented in first row)

Project ratings	ACAD	HEAL	INTER	INTRA	LEIS	ADMI
N	352	307	257	202	287	335
Stress						
Difficulty	6.82	6.48	5.50	7.28	4.76	5.73
Stress	7.37	4.03	4.44	5.51	2.97	5.54
Challenge	7.53	6.67	5.33	7.13	5.04	5.55
Negative impact	5.51	2.81	3.61	3.05	3.33	3.77
Efficacious						
Involvement						
Distractibility	6.48	5.68	4.26	4.84	4.46	5.48
Progress	5.54	4.98	5.92	5.20	5.42	4.31
Commitment	7.54	6.87	7.63	7.50	7.57	7.20
Project Stage	5.81 [b]	5.34 [c]	5.84 [c]	5.32 [d]	5.11 [e]	4.87 [f]
Absorption	6.07	5.27 [a]	5.94 [a]	5.83	6.22	4.44
Importance	8.47	7.71	8.02	8.13	6.96	7.06
Identity/Culture						
Self-identity	5.84	6.07	6.79	6.21	7.38	5.19
Value-congruency	6.71	7.02	8.03	7.52	6.89	6.19
Community/ Culture	4.47	4.47	5.94	5.39	5.01	4.31
Enjoyment	3.65	6.30	7.34	5.89	8.84	3.98
Community						
Support	6.07	5.74	6.31	6.34	5.79	5.70
Others' View of Importance	6.73	5.64	7.13	6.87 [a]	5.77	6.27
Visibility	6.67	5.83	6.49	5.85	5.96	5.97
Structure						
Control	7.56	7.46	6.92	6.71	7.93	6.80
Initiation	7.27	8.41	7.30	7.71	8.37	7.57
Outcome	7.33	6.95	7.55	7.09	8.17	7.46
Future-Other Self						
Experimentation	4.09	5.56	5.12	7.09	5.52	4.62
Exploration	4.21	5.63 [a]	5.84	7.61	5.83	4.31
Extension	5.01	5.79	6.01	7.23	5.98	4.88
Present Self						
Centrality	5.19	6.57	6.84	7.54	6.27	4.57
Expression	4.76 [a]	5.98	6.46 [a]	6.79	6.64	4.25
Future-Better Self						
Improvement	5.97	7.76	6.27	7.63	5.92	5.26
Enhancement	6.36	7.86	7.09	7.83 [a]	6.78	5.38
Past Self						
Preservation	4.99	5.80	5.64	5.73	5.22	4.32 [a]
Re-establishment	4.54	6.47	6.19	6.08	5.59	3.87

Note. ACAD = Academic/Occupational; HEAL = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal; LEIS = Leisure; ADMI = Administrative/ Maintenance.

[a] *N* is reduced by 1 due to missing values. [b] *N* is reduced by 7. [c] *N* is reduced by 6. [d] *N* is reduced by 4. [e] *N* is reduced by 5. [f] *N* is reduced by 9.

Table 19

Mean, SD, range and total number of projects by category and number of participants with at least one project in given category by self-continuity reasoning

	Essentialists (Total $N = 48$)						Narrativists (Total $N = 27$)					
	ACAD	HEAL	INTER	INTRA	LEIS	ADMI	ACAD	HEAL	INTER	INTRA	LEIS	ADMI
N of projects	84	57	31	60	65	85	43	30	40	25	34	43
Percent of total projects	21.9	14.9	8.1	15.7	17.0	22.2	19.9	13.9	18.5	11.6	15.7	19.9
Mean number of projects/participant	1.75	1.19	.65	1.25	1.35	1.77	1.59	1.11	1.48	.93	1.26	1.59
SD	1.16	.84	.70	1.42	1.19	1.42	1.01	.80	1.19	1.00	1.48	1.39
N of participants having at least one project	43	39	26	27	36	38	25	21	23	15	16	22
Percentage	89.6	81.2	54.2	56.2	75.0	79.2	92.6	77.8	85.2	55.6	59.3	81.5

Note. ACAD = Academic/Occupational; HEAL = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal; LEIS = Leisure; ADMI = Administrative/ Maintenance.

of participants having at least one project in a given category. Figure 3 displays the percentage of Essentialist and Narrativist participants by number of projects in each category. Inspection of Figure 3 reveals that for four of the six categories, similar percentages of the two groups listed no projects (although percentages vary from about 10% for Academic, to 20% for Health and Administrative projects, and almost 50% for Intrapersonal projects). Although 40.7% of Narrativists (compared to 25.0% of Essentialists) listed no projects in the Leisure category, this difference was not significant, $\chi^2(1, N = 75) = 7.34$, *ns*. However, percentages of participants indicating no Interpersonal projects did differ across the groups. From among the Essentialists, 43.8% indicated no Interpersonal projects, compared to only 14.8% of the Narrativists, $\chi^2(1, N = 75) = 7.34, p < .01$.

Number of projects by category. Applying one-way ANOVAs to the number of projects in each of the six content categories as dependent variables, and self-continuity reasoning as the independent variable, yields an effect for Interpersonal projects only. Narrativists have a higher mean number of Interpersonal projects, $M = 1.48$, $SD = 1.19$, than Essentialists, $M = .65$, $SD = .70$, $F(1, 73) = 14.75, p < .001$, partial $\eta^2 = .17$ (see Table 19).

Project ratings by category. Table 20 presents mean project ratings for Essentialists and Narrativists on all 29 dimensions by project category. Comparing Essentialists and Narrativists by project category yields significant univariate effects for Interpersonal projects and Administrative/Maintenance projects. Essentialists report that their Interpersonal projects have farther progressed toward completion (higher Project Stage) than Narrativists, $F(1, 46) = 6.23, p < .025$, partial $\eta^2 = .12$. Narrativists, on the

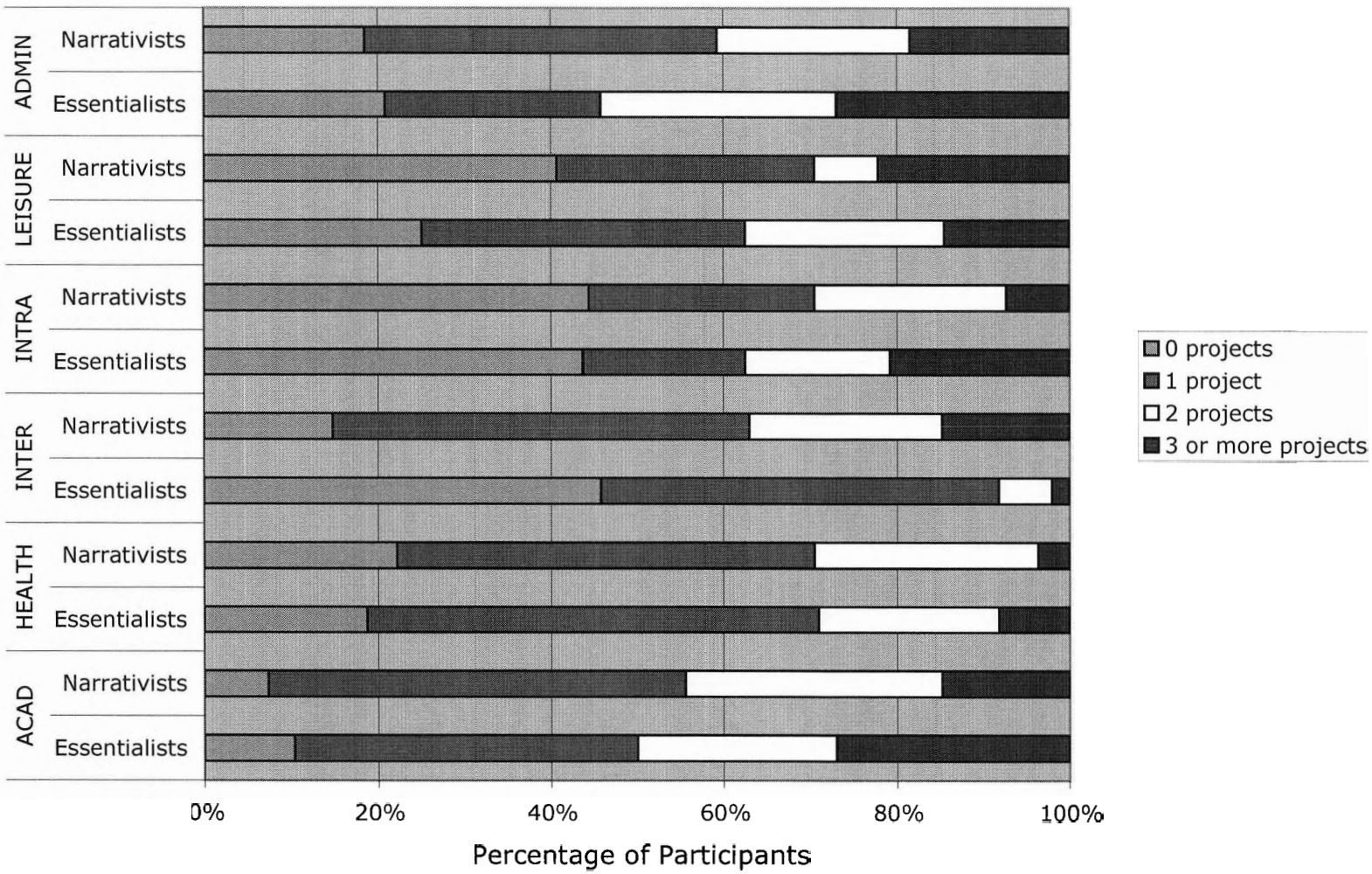


Figure 3. Percentage of Essentialist and Narrativist participants by number of projects per category. ACAD = Academic/Occupational; HEALTH = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal/Value concerns; ADMIN = Administrative/Maintenanc

Table 20

Mean dimension by content category and self-continuity reasoning (N by category presented in first row)

Factor	Essentialists						Narrativists					
Dimension	ACAD	HEAL	INTER	INTRA	LEIS	ADMI	ACAD	HEAL	INTER	INTRA	LEIS	ADMI
N	43	39	26	27	36	38	25	21	23	15	16	22
Stress												
Difficulty	7.08	6.33	5.88	7.88	5.26	5.01*†	6.63	7.25	6.19	7.93	6.45	6.52*†
Stress	7.50	3.95	4.38	5.91	3.55	4.80*†	6.52	3.59	4.79	4.84	3.76	6.31*†
Challenge	7.70	6.53	5.39	7.36	5.50	5.17	7.15	6.82	6.12	6.43	6.03	6.06
Negative impact	6.00	2.98	3.11	3.64	4.45	3.93	5.81	2.63	3.45	2.53	3.94	4.18
Efficacious Involvement												
Distractibility	6.07	5.94	4.41	5.30	4.36	5.32	6.06	6.16	3.76	5.69	4.17	4.75
Progress	5.27	4.97	6.22	4.86	4.94	4.14	5.51	4.68	5.97	4.98	5.33	3.81
Commitment	7.59	6.90	8.10	7.35	7.72	7.13	7.71	6.34	8.38	7.59	7.63	7.23
Project Stage	5.57	5.48	6.73*	5.27	4.47	4.49	5.87[a]	4.99[a]	5.59[a]*	5.56[a]	5.48	4.73[a]
Absorption	6.18	5.64	6.76	6.29	6.04	3.88	5.95	4.64	6.55	5.48	6.72	4.54
Importance	8.43	8.20	8.59	8.68	6.83	7.04	7.65	7.13	8.07	8.47	7.73	7.03
Identity/Culture												
Self-identity	6.06	6.33	7.42	6.34	7.15	4.67**[1]	5.90	5.99	8.01	5.97	8.01	6.69**[1]
Value-congruency	6.83	7.23	8.68	8.17†	6.84	5.85	6.67	7.29	8.63	7.24†	6.89	6.52
Community/Culture	4.69	4.60	6.90	5.79	5.58	3.95	5.11	5.36	7.27	5.20	5.53	4.48
Enjoyment	3.97	6.97	7.80	6.12	8.45	4.12	4.43	5.76	7.81	5.91	8.74	4.34
Community												
Support	6.23	5.49	7.19	6.21	5.08	5.33	5.65	5.29	6.39	5.82	4.47	4.86
Others' View of Importance	7.29	6.22	7.84	7.03	5.93	5.71	6.28	6.00	7.36	6.61	5.77	6.36
Visibility	6.47	5.93	6.64	6.18†	6.36	5.72	5.99	5.10	7.02	4.34†	6.28	4.83

Table 20 (cont'd)

Factor	Essentialists						Narrativists					
Dimension	ACAD	HEAL	INTER	INTRA	LEIS	ADMI	ACAD	HEAL	INTER	INTRA	LEIS	ADMI
Structure												
Control	7.37	6.59	7.17	6.37	7.39	6.94	7.28	7.67	7.27	6.77	6.88	6.55
Initiation	7.48	7.90	7.87	7.56†	8.50	7.98	6.61	8.81	7.40	8.57†	8.22	7.90
Outcome	7.34	6.97	7.89	6.81	8.02	7.53	7.04	6.23	8.32	7.46	8.31	7.06
Future-Other Self												
Experimentation	5.00	5.93	5.94	7.65	5.80	5.14	5.04	4.10	4.96	7.08	5.86	4.20
Exploration	5.27	5.94	6.12	7.98†	6.14	4.62	5.01	4.40	5.56	7.12†	6.11	4.22
Extension	5.57	5.89	7.37	7.77†	6.04	5.27	5.93	5.23	6.26	6.99†	7.09	5.15
Present Self												
Centrality	5.33	6.86	7.60	7.69	6.03	4.44†	5.48	6.58	7.57	7.81	7.38	5.36†
Expression	5.42[a]	6.16	7.92	7.55	6.40	4.50	5.09	5.46	7.35	6.78	7.27	4.40
Future-Better Self												
Improvement	6.55	7.84	6.73	8.35	5.82	5.63	6.04	7.53	6.59	7.58	6.67	4.98
Enhancement	6.73	8.15	7.96	7.98	6.08	6.03	6.60	7.68	7.65	7.33	7.03	5.08
Past Self												
Preservation	5.56	6.60	6.11	5.50	5.14	4.73[a†]	5.69	5.44	6.43	6.09	6.71	3.76†
Re-establishment	5.08	7.04	7.85	5.98	5.67	3.79	4.88	6.68	7.24	6.78	6.41	4.55

Note. ACAD = Academic/Occupational; HEAL = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal; LEIS = Leisure; ADMI = Administrative/ Maintenance. † = Among the five highest differentiating dimensions as per discriminant function analyses performed for Intrapersonal and Administrative projects.

[a] *N* is reduced by 1 due to missing values.

* $p < .025$. ** $p < .01$.

other hand, rated their Administrative projects significantly higher on the dimensions Self-identity, $F(1, 56) = 11.89, p < .01$, partial $\eta^2 = .18$, Difficulty, $F(1, 56) = 6.42, p < .025$, partial $\eta^2 = .10$, and Stress, $F(1, 56) = 5.44, p < .025$, partial $\eta^2 = .09$, than did Essentialists.

These moderate effects for self-continuity reasoning seem to indicate that Narrativists have a more widely distributed sense of self, given that their Administrative projects are rated higher on dimensions of personal meaning, whereas, for Essentialists, such projects merely seem to be everyday practicalities to be checked off a running 'to-do' list. The higher ratings on Difficulty and Stress given by Narrativists appear to follow from their greater investment of self-identity in such projects. The personal stakes are simply higher.

Table 21 presents the mean unit-scaled factor scores of the traditional and self factors by content category for Essentialists and Narrativists. Between subjects ANOVAs applied to the unit-scaled traditional and self-related factors as dependent variables, yield an effect for self-continuity reasoning for the Health/Appearance related projects. Essentialists rate their Health/Appearance projects as more highly relevant to Future-Other Self functions than do their Narrativist counterparts, $F(1, 58) = 6.06, p < .025$, partial $\eta^2 = .10$.

Discriminant function analyses of Intrapersonal projects. Since a multivariate test for Intrapersonal projects showed an overall effect for self-continuity reasoning, $F(29, 11) = 3.50, p < .025$, partial $\eta^2 = .90$ (adjusted $R^2 = .66$), but no single significant dimension, we explored the structure of the differences between Essentialists and Narrativists in that category using discriminant function analyses. Table 22 (left column)

Table 21

Mean factor scores by content category and self-continuity reasoning (unit-scaled, orthogonal factor solution)

	Essentialists						Narrativists					
	ACAD	HEAL	INTER	INTRA	LEIS	ADMI	ACAD	HEAL	INTER	INTRA	LEIS	ADMI
N	43	39	26	27	36	38	25	21	23	15	16	22
Traditional Factors												
Stress	7.07	4.95	4.69	6.20	4.69	4.73	6.53	5.07	5.14	5.44	5.05	5.77
Efficacious Involvement	6.16	5.87	7.00	6.19	5.94	5.23	6.10	5.29	6.81	6.05	6.45	5.43
Identity/Culture	5.39	6.28	7.70	6.61	7.00	4.65	5.53	6.10	7.93	6.08	7.29	5.51
Community	6.66	5.88	7.22	6.47	5.79	5.59	5.98	5.46	6.92	5.59	5.50	5.35
Structure	7.40	7.15	7.64	6.91	7.97	7.48	6.98	7.57	7.66	7.60	7.80	7.17
Self Factors												
Future-Other	5.28	5.92*	6.47	7.80	5.99	5.01	5.33	4.58*	5.59	7.06	6.35	4.52
Present	5.35	6.51	7.76	7.62	6.21	4.47	5.29	6.02	7.46	7.29	7.33	4.88
Future-Better	6.64	7.99	7.34	8.16	5.95	5.83	6.32	7.61	7.12	7.46	6.85	5.03
Past	5.32	6.82	6.98	5.74	5.40	4.26	5.28	6.06	6.84	6.43	6.56	4.16

Note. ACAD = Academic/Occupational; HEAL = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal; LEIS = Leisure; ADMI = Administrative/ Maintenance.

* $p < .025$.

Table 22

Structure Matrix: Pooled within-groups correlations between discriminating personal project dimensions and standardized canonical discriminant functions for Essentialists and Narrativists for project category Intrapersonal and Administrative/Maintenance

Intrapersonal ($N = 41$)		Administrative/Maintenance ($N = 58$)	
Dimension		Dimension	
Visibility (C)	-.31	Self-identity (M)	.47
Value-congruency (M)	-.27	Difficulty (SE)	.37
Exploration (S)	-.25	Stress (SE)	.35
Initiation (SU)	.25	Centrality (S)	.23
Extension (S)	-.23	Preservation (S)	-.23
Re-establishment (S)	.22	Enhancement (S)	-.21
Outcome (E)	.21	Challenge (SE)	.20
Expression (S)	-.19	Visibility (C)	-.19
Enhancement (S)	-.18	Re-establishment (S)	.18
Negative impact (SU)	-.18	Experimentation (S)	-.18
Challenge (SE)	-.18	Value-congruency (M)	.17
Absorption (M)	-.18	Absorption (M)	.17
Improvement (S)	-.18	Distractibility	-.16
Experimentation (S)	-.16	Outcome (E)	-.16
Stress (SE)	-.15	Others' View of Importance (C)	.14
Preservation (S)	.15	Improvement (S)	-.14
Self-identity (M)	-.11	Control (SU)	-.12
Community/Culture	-.11	Community/Culture	.10
Difficulty (SE)	.10	Support (C)	-.10
Project Stage	.08	Exploration (S)	-.09
Commitment	.08	Progress (E)	-.08
Importance (M)	.07	Project Stage	.07
Distractibility	.06	Enjoyment (M)	.06
Enjoyment (M)	-.06	Negative impact (SU)	.05
Support (C)	-.04	Commitment	.03
Control (SU)	.04	Initiation (SU)	-.03
Progress (E)	.03	Expression (S)	-.03
Others' View of Importance (C)	-.03	Extension (S)	-.03
Centrality (S)	-.01	Importance (M)	.01

Note. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; E = Efficacy; M = Meaning; C = Community, S = Self. Variables are ordered by absolute size of correlation within function. For Intrapersonal projects, *N* for Essentialists was 27 and for Narrativists 14. For Administrative/Maintenance projects, *N* for Essentialists was 37 and for Narrativists 21.

displays the correlations of personal project dimensions with the discriminant function in the order of their contribution to the discrimination of Essentialists from Narrativists using the 29 personal project dimensions averaged across Intrapersonal projects only. The discriminant function is statistically significant, Wilks' lambda = .10, $\chi^2(29, N = 41) = 56.96, p < .01$, and classifies 100% of cases correctly.

By convention, correlations of .30 (10% of variance) are considered eligible for interpretation, except when the sample is unusually homogeneous in which case a lower criterion is recommended (Tabachnick & Fidell, 2001). Although Visibility is the only dimension to exceed this criterion (see Table 22, left column), we chose to interpret the first five dimensions—those with correlations of .23 and higher. A negative correlation indicates that Essentialists have higher values on a dimension, whereas a positive value indicates that Narrativists have higher scores.

Evaluating the five highest loadings, Essentialists exhibit higher levels of Visibility, Value-congruency, Exploration, and Extension with their Intrapersonal projects, while they score lower on Initiation. This pattern indicates that Essentialists are generally reluctant to initiate projects in this domain, and if they do take them on, they are likely to enlist the help of other people in making the projects visible (if they are not already visible by virtue of having been initiated by others). As well, for Essentialists, these projects need to be highly value congruent and are dedicated towards change—something that Essentialists tend to avoid. This change-avoidant stance may make them reluctant to initiate such projects in the first place and more likely to seek support from others.

Discriminant function analyses of Administrative/Maintenance projects. A discriminant function with the 29 personal project dimensions averaged across Administrative/Maintenance projects as independent variables is also significant, Wilks' lambda = .27, $\chi^2(29, N = 58) = 54.48, p < .01$, and classifies 94.8% of cases (55 of 58) correctly. Examining the structure matrix (Table 22, right column) reveals that the first three dimensions exceed the criterion of a correlation of .30 with the discriminant function differentiating between Essentialists and Narrativists. Following these most highly discriminating variables Self-identity, Difficulty, and Stress (which also reached significance levels in the ANOVAs), are the dimensions Centrality and Preservation. Positive correlations indicate that Narrativists exhibit higher ratings on the first four of these five dimensions, while Essentialists rate their Administrative projects higher on Preservation.

As discussed with reference to the ANOVA results, Narrativists' more widely distributed sense of self appears to extend even to rather mundane administrative projects. For Narrativists, Administrative projects are given higher ratings on Self-identity and Centrality. This greater investment of a sense of self in such projects is also reflected in higher ratings on Stress and Difficulty. For Essentialists, higher ratings on Preservation show that the function of Administrative projects is to maintain the status quo. This may reflect a stronger tendency among Essentialists to strive for sameness, in particular by engaging in projects that keep the ball rolling, rather than inviting personal change.

Differences in ratings across categories. Before continuing with further comparisons of Essentialists and Narrativists across specific project categories, it is

important to establish that project evaluations do, in fact, vary systematically by project content. To accomplish this, a set of analyses were conducted that assess the extent to which projects within each of the content categories differ in terms of the main project dimensions (i.e., Meaning, Community, Efficacy, Structure, Stress, Present, Past, Future-Better, and Future-Other self functions) when Essentialists and Narrativists are combined. These analyses are intended to provide the backdrop against which group differences presented in the subsequent section can be evaluated and interpreted.

Because not every participant reported projects in every category, and in an effort to preserve the largest possible *N* for these analyses, comparisons were performed in a pairwise fashion by examining two project categories at a time. That is, repeated measures ANOVAS with the factors category (two categories at a time) and self-continuity reasoning (Essentialist, Narrativist) as independent variables were applied to the personal project factors and dimensions. The main effect for category (averaged across the two groups) is what interests us in this section, while the main effect for group (averaged across two categories at a time) will not be reported, as it is not meaningful in addition to the difference comparisons performed within (rather than across) content categories reported earlier. The interactions between these two factors, however, are what we will turn our attention to in the subsequent section as a final way of investigating differences associated with the personal project systems of Essentialists and Narrativists in our sample.

For these analyses, the alpha level was reduced to .01 to bolster Type I error protection. With an adjusted alpha of .01, main effects for category were found for 46 of a total of 135 comparisons, indicating that project evaluations do, in fact, vary

systematically by content. Table 23 displays the combined mean factor scores for Essentialists and Narrativists by project category. It should be noted that the actual means used to carry out these analyses differ somewhat from one analysis to the next due to pairwise exclusion of participants in order to preserve the largest possible *N*. For that reason, the means that appear in Table 23 are based on all 75 participants.

Reliable differences between categories are indicated using a subscript and superscript notation in Table 23, with superscript numerals indicating the categories with *higher* ratings, and subscript numerals referring to the categories with *lower* ratings on a given factor. For example, for the combined *Stress* scores of Essentialists and Narrativists, Academic projects were rated significantly more stressful than all other categories, while these other categories did not differ reliably from each other on project Stress. On the *Identity/Culture* factor, a group of subscript numerals indicates that Interpersonal projects are the leading category, rated higher than Academic, Health, Intrapersonal, and Administrative projects. Leisure projects are also rated higher on Identity/Culture than the aforementioned categories with the exception of the Health category, while four superscript numerals for Administrative/Maintenance indicate that this category has the least relevance to Identity/Culture associated with one's project system.

Given our interest in how personal projects are used to achieve certain self-functions, the observed differences in the extent to which particular project content categories are rated relevant to these functions are particularly interesting. With regard to the self factors, Intrapersonal projects seem to constitute the most relevant category across domains, while Interpersonal and Health projects seem to fulfill more specific self-

Table 23

Mean factor scores of Essentialists and Narrativists combined by content category (N by category presented in first row)

	1 ACAD	2 HEAL	3 INTER	4 INTRA	5 LEIS	6 ADMI
N	68	60	49	42	52	60
Traditional Factors						
Stress	6.87_{23456}	4.99^{1}	4.90^{1}	5.93^{1}	4.80^{1}	5.11^{1}
Efficacious	6.14_{26}	5.67^{13}	6.91_{2}	6.14	6.10	5.30^{1}
Involvement						
Identity/Culture	5.44^{35}	$6.22^{3}{}_{6}$	7.81_{1246}	$6.42^{35}{}_{6}$	7.09_{146}	4.96^{2345}
Community	6.41_{2}	5.73^{13}	7.08_{25}	6.16	5.70^{3}	5.50
Structure	7.24^{5}	7.30	7.65	7.16^{5}	7.92_{146}	7.37^{5}
Self Factors						
Future-Other	5.30^{4}	5.45^{4}	6.06	7.54_{126}	6.10	4.83^{4}
Present	5.33^{345}	$6.34^{34}{}_{6}$	7.62_{126}	7.50_{126}	6.55_{1}	4.62^{234}
Future-Better	$6.52^{24}{}_{6}$	7.86_{16}	7.24	7.91_{156}	6.23^{4}	5.54^{124}
Past	$5.31^{23}{}_{6}$	6.55_{16}	6.91_{16}	5.99_{6}	5.76	4.22^{1234}

Note. ACAD = Academic/Occupational; HEAL = Health/Appearance; INTER = Interpersonal; INTRA = Intrapersonal; LEIS = Leisure; ADMI = Administrative/ Maintenance. Pairwise exclusion of participants causes the actual means used in the analyses for comparisons of category pairs to deviate from the means presented in this table. *Subscript* numerals indicate that current category is significantly higher than the indicated category/ies at $p < .01$ (i.e., subscript 1 signifies that the rating in given category is higher than that of Academic projects). *Superscript* numerals indicate that current category is significantly lower than the indicated category/ies at $p < .01$ (i.e., superscript 1 indicates that the rating in given category is lower than that of Academic projects).

functions. Administrative projects, on the other hand, are the least relevant to self-functions.

More specifically, for *Present self* functions, Interpersonal and Intrapersonal projects are rated reliably higher than Academic, Health, and Administrative projects. With regard to the *Past self*, Health and Interpersonal projects rated higher than both Academic and Administrative projects. *Future-related self* functions are most closely associated with Intrapersonal projects. This category is rated reliably higher than Academic and Administrative projects on both Future-self factors, as well as higher than Health projects on the Future-Other, and higher than Leisure projects on the Future-Better factor.

Based on these overall differences in ratings of content categories across both groups, we can now proceed to interpret differences that may appear when comparing Essentialists' and Narrativists' ratings across two categories. It is in these interactions, that we hope to find differences between Essentialists and Narrativists. To interpret these interactions appropriately, however, we will refer back to the findings reported in this section about the relative importance of project categories.

Interactions of project ratings by self-continuity reasoning and category. Profile analyses (i.e., the interaction effect of the previously reported repeated measures ANOVAs) were applied to the sets of unit-scaled traditional and self-related factors to probe for 'differences in differences' in the project ratings of Essentialists and Narrativists across categories. As mentioned earlier, profile analyses were performed in a pairwise fashion to preserve the largest possible *N* for these analyses. The number of Essentialists and Narrativists included in each of the comparisons (from the total of 48

Essentialists and 27 Narrativists) is given in the figure legends. The alpha level for these analyses was also reduced to .01 to bolster Type I error protection.

Differences in profiles of Essentialists and Narrativists were observed on the Stress factor for their Academic and Administrative projects, $F(1, 53) = 7.63, p < .01$, partial $\eta^2 = .13$. While Narrativists exhibit only slightly lower levels of stress on Administrative projects, Essentialists experience considerably lower levels of stress with this category of projects as compared to their Academic ones (see Figure 4).

Dimension level follow-up analyses. To explore the finer variations in the personal project systems of Essentialists and Narrativists, pairwise profile analyses were carried out on the dimension level as well. Applying an adjusted alpha level of .01 yields six significant interactions in dimension profiles across the 15 project content category pairs (total number of comparisons is 29 by 15, i.e., 435).

Essentialists rate their Interpersonal projects as having progressed farther toward completion: more so than their Academic, $F(1, 41) = 7.61, p < .01$, partial $\eta^2 = .16$ (see Figure 5A) and their Leisure projects, $F(1, 30) = 7.79, p < .01$, partial $\eta^2 = .21$ (see Figure 5B). Narrativists, by contrast, exhibited much less variability, and rated their Academic projects as slightly closer to completion than their Interpersonal ones, and Interpersonal projects as slightly farther along than their Leisure projects. It seems that Essentialists and Narrativists achieve their self preservation needs by very different routes. While for Narrativists Health projects rank low on the ability to provide a sense of self preservation, and Intrapersonal projects rank higher, for Essentialists the picture is reversed—they achieve self preservation more likely through Health/Appearance projects than through Intrapersonal ones, $F(1, 34) = 8.92, p < .001$, partial $\eta^2 = .21$ (see Figure 6). This

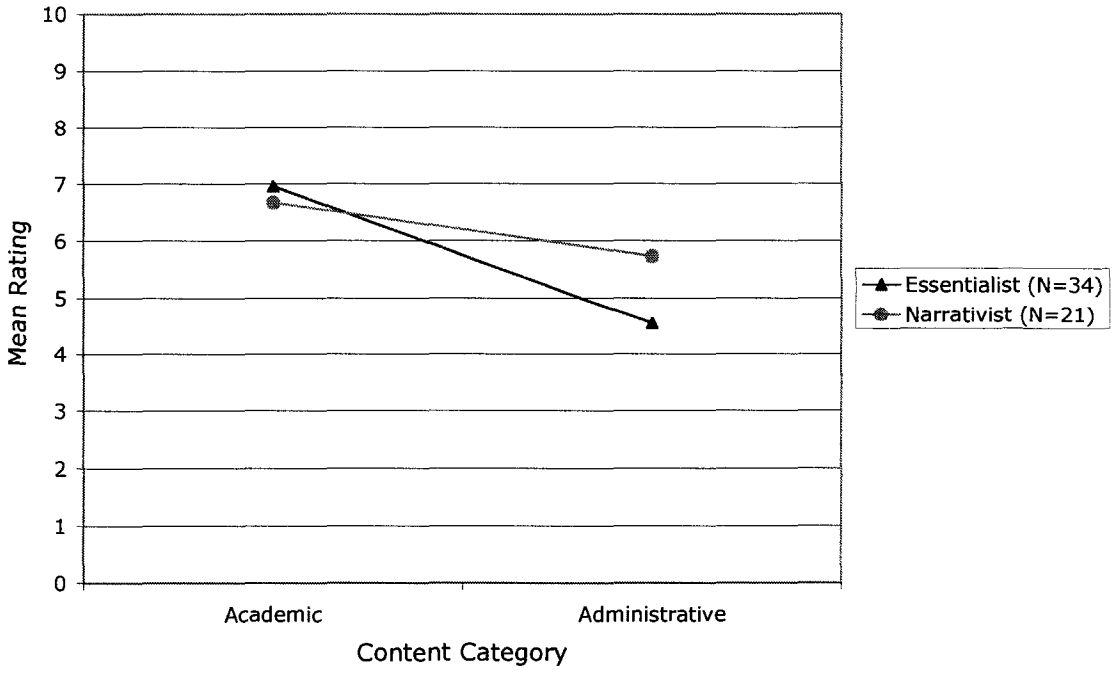


Figure 4. Profile differences between Essentialists and Narrativists in mean scores on the Stress factor for Academic and Administrative projects.

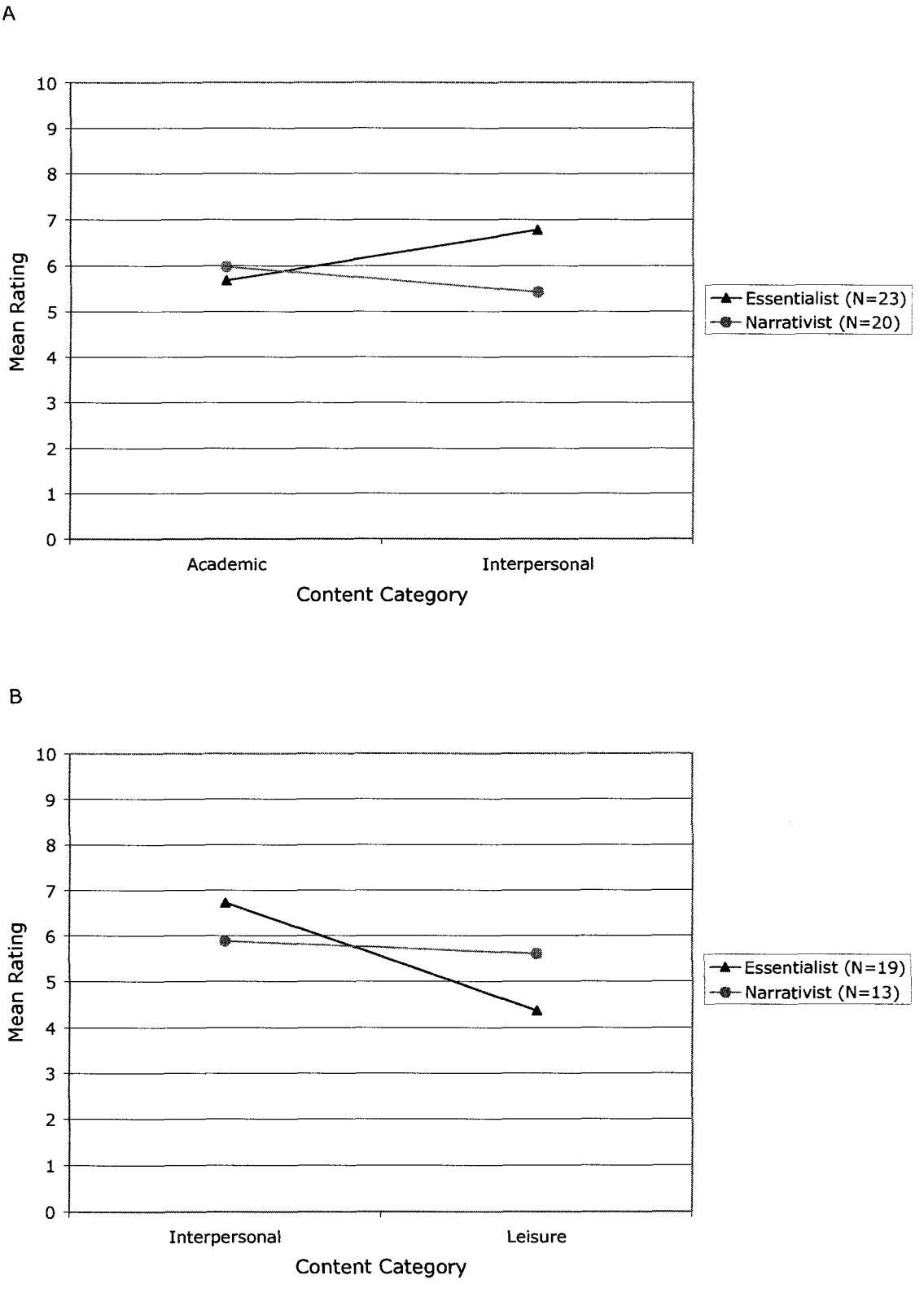


Figure 5. Profile differences between Essentialists and Narrativists in Project Stage ratings for Academic and Interpersonal (A) and Interpersonal and Leisure projects (B).

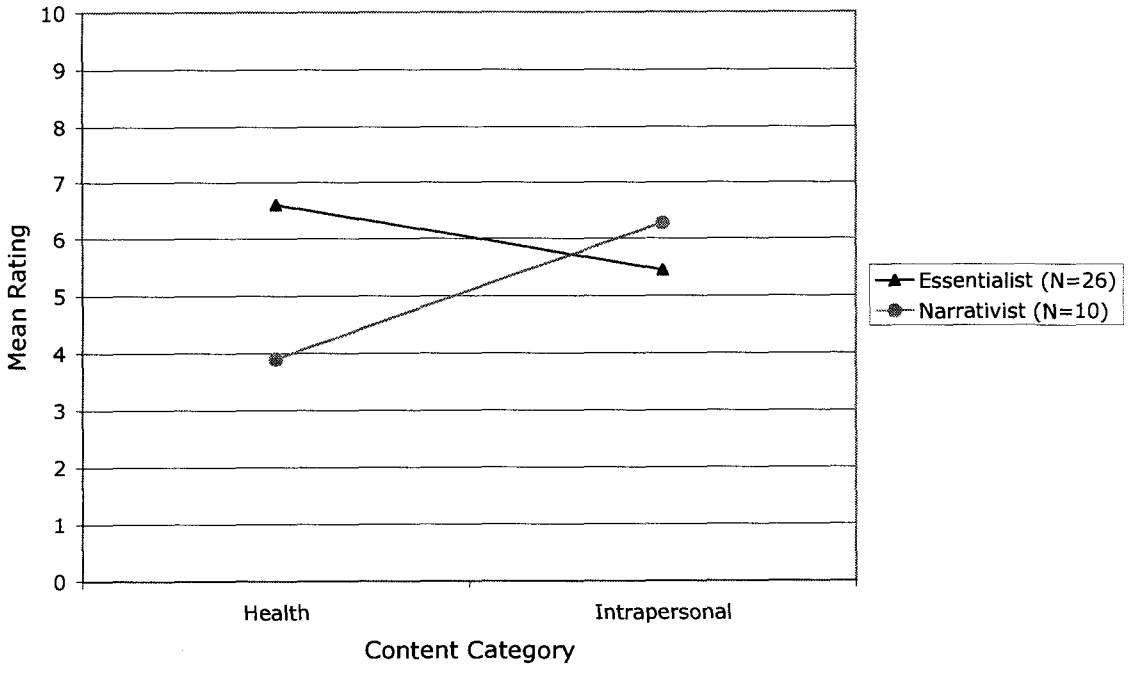


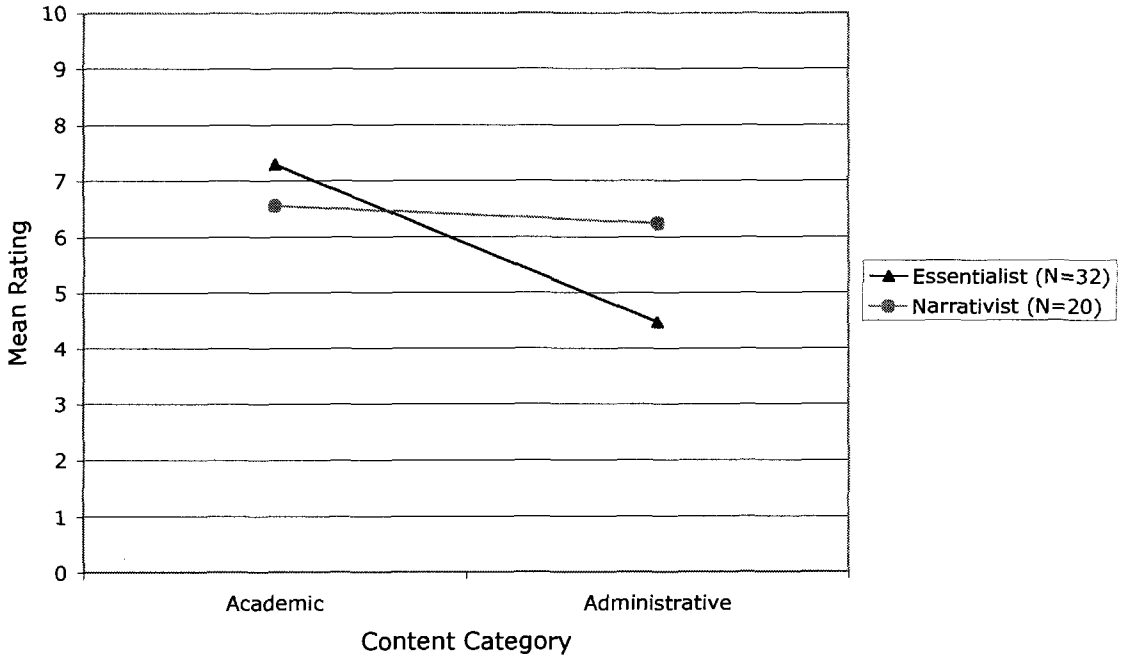
Figure 6. Profile differences between Essentialists and Narrativists in mean ratings on Preservation for Health and Intrapersonal projects.

difference is also expressed on the factor level, where a profile difference of Past self ratings across Health related and Intrapersonal projects is indicated by a statistical trend, $F(1, 35) = 6.63$, $p < .015$, partial $\eta^2 = .16$. Again, while Narrativists evaluate their Intrapersonal projects as more relevant to preserving their sense of self than their Health projects, Essentialists deem their Health projects as more crucial to achieving or preserving a connection to past self aspects. In other words, Essentialists use projects focusing on Health and body as a route to achieving self-preservation while Narrativists achieve or maintain a sense of connection through Intrapersonal projects.

A final set of differences centers on Administrative projects. These projects are clearly much less stressful for Essentialists when compared to their Academic undertakings, yet for Narrativists there is only a small difference, $F(1, 50) = 14.85$, $p < .001$, partial $\eta^2 = .23$ (see Figure 7A). This might be explained by the relatively higher investment of self-identity by Narrativists in their Administrative projects. Essentialists experience lower levels of self-identity associated with their Administrative projects, yet report levels of self-identity associated with their Academic projects that roughly equal those of their Narrative counterparts, $F(1, 50) = 17.07$, $p < .001$, partial $\eta^2 = .25$ (see Figure 7B).

A similar pattern is observed when looking at the profiles of self-identity across Health and Administrative projects, $F(1, 44) = 11.43$, $p < .01$, partial $\eta^2 = .21$ (see Figure 8), as well as Intrapersonal and Administrative ones (though with alpha correction, as a statistical trend only), $F(1, 27) = 6.97$, $p < .02$, partial $\eta^2 = .21$. In each case, Narrativists exhibit higher levels of self-identity associated with their Administrative projects, while for Essentialists the levels of self-identity are lower for this category.

A



B

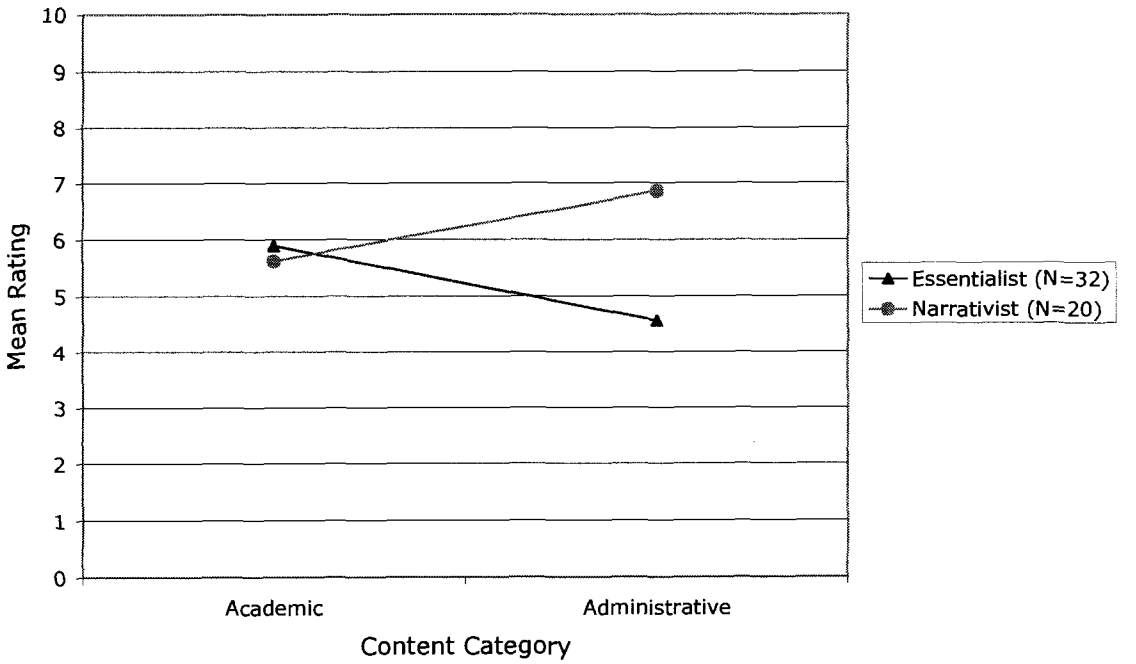


Figure 7. Profile differences between Essentialists and Narrativists in mean ratings on Stress (A) and Self-identity (B) for Academic and Administrative projects.

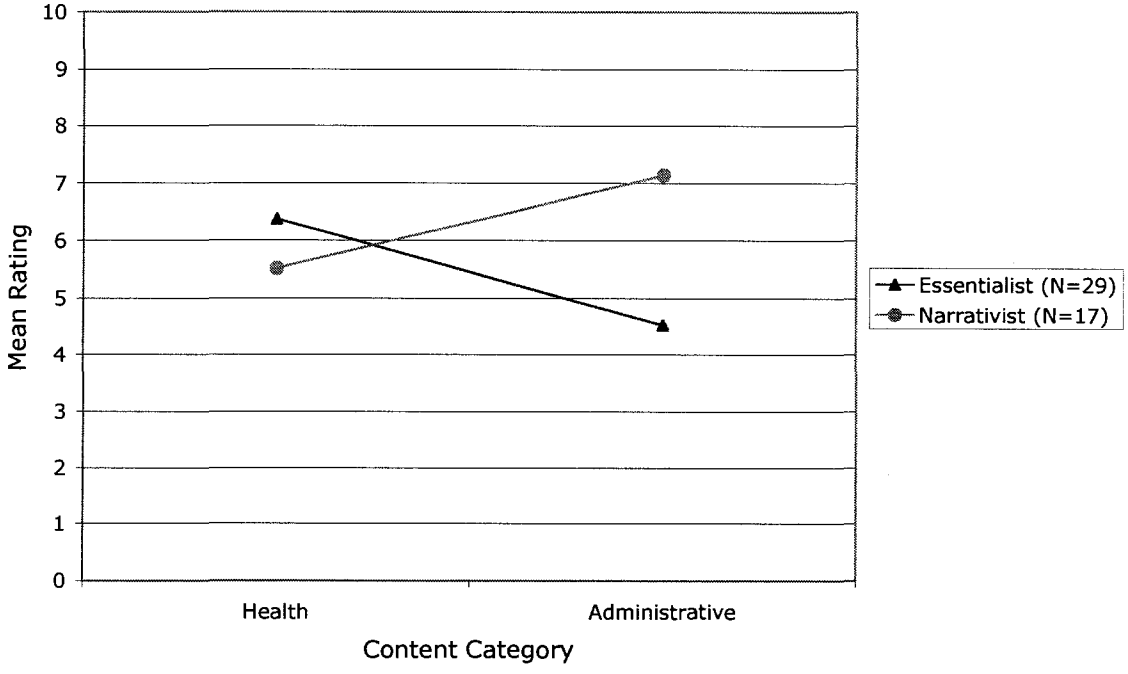


Figure 8. Profile differences between Essentialists and Narrativists in mean ratings on Self-identity for Health and Administrative projects.

Comparing Essentialists and Narrativists on Subjective Well-Being and Personality

Personality and subjective well-being (SWB) measures were completed by Cohort Two participants only, and hence the overall number of participants is 184 (47.3% of total sample). Appendix K displays means (SD) for the subjective well-being and personality measures. Fifty-four of these participants also completed the interview section, of whom 32 were classified as employing an Essentialist strategy in their self-continuity reasoning, and 22 were classified as using a Narrativist strategy.

Univariate between-subjects analyses of variance were applied with the personality measures and indicators of subjective well-being as dependent variables, and self-continuity reasoning as the independent variable. Using an a priori alpha level of .05, personality measures were not affected by self-continuity reasoning, nor were any of the subjective well-being measures affected by the independent variable. Table 24 displays means, SD, and F-statistics for each variable.

Table 24
Means and SD for personality and SWB measures by self-continuity reasoning, along with F-statistics and partial η^2

	Essentialists ($N = 32$)		Narrativists ($N = 22$)		Total ($N = 54$)		Statistic	
	Mean	SD	Mean	SD	Mean	SD	F	Partial η^2
Personality								
Extraversion	3.37	.81	3.45	.99	3.40	.88	.11	.00
Agreeableness	3.85	.64	4.01	.49	3.92	.58	.97	.02
Conscientiousness	3.57	.78	3.57	.62	3.57	.71	.00	.00
Neuroticism	2.93	.94	2.99	1.06	2.96	.98	.05	.00
Openness	3.69	.74	3.87	.79	3.77	.76	.72	.01
SWB								
Life Satisfaction	4.74	1.32	5.09	1.29	4.88	1.31	.95	.02
Positive Affect	3.29	.64	3.40	.65	3.34	.64	.36	.01
Negative Affect	2.19	.75	2.43	.68	2.29	.72	1.40	.03
Affect Balance	1.10	1.12	.97	1.19	1.05	1.14	.17	.00

Note. df between = 1, df error = 52

In short, Essentialists and Narrativists cannot be differentiated in terms of their self-rated personality characteristics, nor in their general satisfaction with life or overall levels of positive or negative affect. We did not have particular hypotheses about how these two groups might differ in terms of their personality, but wanted to investigate whether more traditional descriptors of persons (such as the Big Five) could add to the current conceptualization of Essentialists and Narrativists. According to our results, they do not. Nor do the labels Essentialist and Narrativist differentiate the happy from the sad. In sum, these measures of subjective well-being and personality, while interesting in their own right, do not seem to relate in any way to our measures of self-continuity. If nothing else, then, these measures provide divergent construct validity: self-continuity is clearly distinct from these other 'self' metrics. After examining the relationship of personal project appraisal with personality and SWB measures in the following two sections for the overall group, however, we will take a final look at whether these relationships might differ when examined for Essentialists and Narrativists separately.

Relationship between Personal Projects, Subjective Well-Being, and Personality

Characteristics of a person's personal project system have been related to subjective well-being in numerous studies (see Little, 1985, 1988, 1989, 1998, 2000a). Personality characteristics have also been shown to relate to personal project variables in unique ways (Little, 1988, 1989, 1998; Little et al., 1992).

Subjective Well-Being

According to Little's social-ecological model of well-being, the first four conceptual factors (Meaning, Structure, Community, and Efficacy) are expected to be positively related to subjective well-being, while Stress is negatively related (Little, 2000a). Empirically, however, stronger evidence is reported for the factors Stress, Efficacy, and Structure, while the factors Meaning and Community fail to exhibit consistent relationships with well-being (Little, 1998; McGregor & Little, 1998). We will present Pearson-correlations between SWB and personal project dimensions and factors, summarize them briefly, and then further compare and contrast them with findings from the extensive literature in the discussion section.

Relationships on the dimension level. Table 25 presents Pearson-correlations between the subjective well being indicators and the 29 personal project dimensions, Table 26 displays the correlations between SWB and the traditional and self-related factor scores (both regressed and unit-scaled). Affect balance is computed by subtracting negative affect from positive affect and is designed to capture the relationship between these two dimensions.

Dimensions in Table 25 are arranged according to the factor structure inherent to our sample and as presented in the structural analyses section. Abbreviations in parentheses indicate the conceptual domain the dimensions are assigned to in Little's five factor model (compare Table 1). As might be expected from the literature, we find moderate relationships of well-being indicators with *Stress* dimensions (Difficulty, Stress), *Efficacy* dimensions (Progress, and Outcome), and *Structure* dimensions (especially for Control, while Initiation only relates to positive affect and Negative

Table 25

Pearson-correlations between subjective well-being indicators and personal project dimensions (N = 184)

Factor	Subjective Well-Being			
Dimension	Life Satisfaction	Positive Affect	Negative Affect	Affect Balance
Stress				
Difficulty (SE)	-.24**	-.20**	.16*	-.22**
Stress (SE)	-.20**	-.22**	.37***	-.35***
Challenge (SE)	-.11	-.04	.18*	-.13^
Negative impact (SU)	-.09	-.10	.10	-.12
Efficacious Involvement				
Distractibility	-.12	-.20**	.14*	-.21**
Progress (E)	.17*	.22**	-.17*	.23**
Commitment	.09	.15*	.00	.09
Project Stage	.13^	.17*	-.10	.16*
Absorption (M)	.01	.13^	.05	.05
Importance (M)	-.02	.06	.07	-.01
Identity/Culture				
Self-identity (M)	.08	.08	-.05	.08
Value-congruency (M)	.06	.21**	.00	.12^
Community/Culture	.02	.15*	-.08	.14^
Enjoyment (M)	.11	.21**	-.17*	.23**
Community				
Support (C)	.12	.21**	-.12	.20**
Others' View of Importance (C)	.01	.06	.11	-.03
Visibility (C)	.13^	.18*	.08	.06
Structure				
Control (SU)	.25**	.29***	-.18*	.28***
Initiation (SU)	.08	.17*	-.06	.14^
Outcome (E)	.25**	.31***	-.09	.24**
Future-Other Self				
Experimentation	-.08	.10	.03	.05
Exploration	-.05	.15*	.09	.04
Extension	-.05	.14*	.11	.02
Present Self				
Centrality	.04	.17*	.03	.08
Expression	-.01	.18*	-.02	.12
Future-Better Self				
Improvement	-.05	.12	.08	.02
Enhancement	.03	.21**	-.02	.13^
Past Self				
Preservation	-.01	.13^	-.05	.10
Re-establishment	-.02	.17*	.02	.09
Adjusted multiple R^2 of significant dimensions	.09**	.14**	.14***	.18***

Note. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; E = Efficacy; M = Meaning; C = Community.

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 26
Pearson-correlations between subjective well-being indicators and personal project factors (N = 184)

Factor	Subjective Well-Being			
	Life Satisfaction	Positive Affect	Negative Affect	Affect Balance
		Regressed Factors		
Traditional Factors				
Stress	-.22**	-.21**	.31***	-.31***
Efficacious Involvement	.10	.16*	-.09	.15*
Identity/Culture	.02	.12	-.07	.12
Community	.14^	.14^	.02	.07
Structure	.18*	.24**	-.11	.21**
Self Factors				
Future-Other	-.11	.04	.09	-.03
Present	.09	.16*	-.03	.11
Future-Better	-.02	.08	.06	.01
Past	.00	.07	-.06	.08
Adjusted multiple R^2 of significant factors	.07**	.13***	.09***	.15***
		Unit-scaled Factors		
Traditional Factors				
Stress	-.21**	-.19*	.27***	-.28***
Efficacious Involvement	.12	.24**	-.08	.19
Identity/Culture	.09	.22**	-.10	.19*
Community	.11	.18*	.02	.10
Structure	.25**	.33***	-.15*	.28***
Self Factors				
Future-Other	-.06	.14^	.08	.04
Present	.02	.19*	.01	.11
Future-Better	-.02	.17*	.04	.08
Past	-.01	.16*	-.02	.11
Adjusted multiple R^2 of significant factors	.07***	.14***	.07**	.13***

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

impact is not related at all). With regard to traditional Meaning (M) and Community dimensions (C), our data also concur with the literature in that these dimensions show less consistent relationships with the subjective well-being indicators. In particular, none of them relates to life satisfaction.

From among the five *Meaning* dimensions, Absorption, Importance, and Self-identity are not related to SWB, while Value-congruency is associated with positive affect only, and Enjoyment—representing affective meaning—is moderately related to all three affect indicators. From the *Community* dimensions, Support relates to positive affect and affect balance, while Visibility relates to positive affect only. Inspection of Table 25 leads to the conclusion that, although there is some clustering, not all dimensions of a particular factor relate to the same extent to the subjective well-being variables.

Examining the relationships of the self related dimensions to subjective well-being yields a fairly clear picture: No associations are observed with life satisfaction in general or with negative affect. However, at least one dimension of each of the four factors relates to positive affect: Exploration and Extension as *Future-Other* and Enhancement as *Future-Better* self dimension exhibit small to moderate relationships. Both *Present* self dimensions, Centrality and Expression, as well as the *Past* self related dimension Re-establishment are also related to positive affect. What this pattern of relationships may mean is that being engaged in projects that serve self-expression, bring about changes to the self, and serve to maintain or regain a connection with past self aspects, is associated with experiencing higher levels of positive affect, while not influencing the occurrence of negative affect or overall life satisfaction.

Overall, entering those personal project dimensions relating to each SWB indicator with zero-correlation coefficients significant on at least alpha < .05, accounts for 9% of the variance in life satisfaction, for 14% in positive and negative affect, and for 18% in affect balance (see Table 25; also refer to intercorrelations between dimensions in Appendix H). These adjusted proportions of accounted variance are significant at the $p <$ .01, and represent moderate effect sizes.

Relationships on the factor level. This overall picture is replicated when examining the relationship of unit-scaled self factors to SWB (bottom half of Table 26). All four factors show a relationship to positive affect, although only as a statistical trend for Future-Other. With the regressed factor scores, however, only *Present* self functions are related to positive affect (see top half of Table 26). Since the nine self-dimensions were all highly intercorrelated (see Appendix H), which is also expressed in the intercorrelation of unit-scaled factor scores, the regressed factor scores may be better suited to detect unique relationships with SWB than the unit-scaled factor scores. This relationship between *Present* self and positive affect suggests that projects that express self may positively influence affective states, although, of course, causality may work the other way: people who experience high amounts of positive affect may take on projects that are more central to their sense of self. There is a third possibility. Since the questions about affect were targeted at the respondent's experience in the preceding few weeks, it may be that projects that serve more 'immediate' self functions have consistent positive effects on affect, while Past and Future oriented projects may be longer term and hence show less consistent effects on concurrent SWB.

In terms of the traditional factors and their relationship to SWB, both the regressed and unit-scaled factors (see Table 26) yield a fairly clear and expected picture. *Stress* and *Structure*—the two factors that do not include any Meaning or Community dimensions—are moderately and consistently related to SWB indicators, while only Efficacious Involvement (and not Identity/Culture or Community) shows relationships with positive affect and affect balance using regressed scores, and all three factors are related to positive affect (and except for Community, affect balance) when examining unit-scaled scores.

In summary, for the traditional dimensions, we observed relationships similar to those reported in the literature (Christiansen et al., 1998; Little, 1998; 2000a; McGregor & Little, 1998, Röhrle et al., 1994; Wilson, 1990; Yetim, 1993). Our newly added self-related dimensions—most clearly the dimensions of Present self—relate to positive affect only.

Personality

Relationships between personal project variables and personality characteristics have been previously examined both across all project domains, as well as for Academic and Interpersonal projects separately (Little et al., 1992). In the current study, we computed Pearson-correlations between the Big Five personality factors and personal project dimensions and factors (unit-scaled and regressed) across all project domains and across Academic and Interpersonal projects.

Dimension level. Results presented in Table 27 suggest that although the traditional dimensions show interrelations with a variety of personality factors, we

Table 27

Pearson-correlations between personality variables and personal project dimensions (N = 184)

Factor	Personality				
Dimension	E	A	C	N	O
Stress					
Difficulty (SE)	-.18*	.05	-.05	.23**	.09
Stress (SE)	-.02	-.05	-.02	.29***	.00
Challenge (SE)	-.15*	.04	-.09	.20**	.13^
Negative impact (SU)	.00	-.15*	.03	.03	-.08
Efficacious Involvement					
Distractibility	-.09	-.12	-.29***	.20**	-.12
Progress (EF)	.11	.09	.13^	-.14^	.20**
Commitment	.10	.18*	.24**	-.05	.12
Project Stage	.07	.06	.11	-.07	.18*
Absorption (M)	.00	.04	.03	.09	.24**
Importance (M)	.04	.07	.09	.07	.12
Identity/Culture					
Self-identity (M)	.01	.14^	.15*	-.05	.22**
Value-congruency (M)	-.04	.12^	.11	.00	.29***
Community/Culture	-.07	-.06	-.12	-.07	.21**
Enjoyment (M)	-.07	.11	.21**	-.13^	.14^
Community					
Support (CO)	.05	.18*	.09	-.09	-.11
Others' View of Importance (CO)	-.01	.02	.06	.08	.09
Visibility (CO)	.15*	.05	.04	-.08	.08
Structure					
Control (SU)	.19*	.12^	-.01	-.22**	.11
Initiation (SU)	.08	.18*	.02	-.10	.20**
Outcome (EF)	.19*	.25**	.14^	-.25**	.11
Future-Other Self					
Experimentation	-.11	.03	-.11	.07	.26***
Exploration	-.02	.07	-.01	.08	.26***
Extension	-.06	.09	-.05	.07	.31***
Present Self					
Centrality	-.01	.02	-.06	.07	.26***
Expression	-.02	-.02	-.03	.02	.20**
Future-Better Self					
Improvement	-.08	.03	-.11	.11	.34***
Enhancement	-.03	.11	-.02	-.01	.34***
Past Self					
Preservation	.06	.17*	.03	-.03	.21**
Re-establishment	-.02	.08	.05	.05	.27***

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; O = Openness. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; EF = Efficacy; M = Meaning; CO = Community.

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

observe a strict alignment of correlations only with respect to Openness to Experience for the self-related dimensions. That is, the pattern of significant associations between personality factors and PPA dimensions appears random in the top half of Table 27. In the bottom half of the same table, everything is related to Openness. The only exception to this pattern is an association between Preservation and Agreeableness. An examination of the relationships between the personality factors and the traditional and self-related factors (regressed and unit-scaled, see Table 28) may work to clarify this pattern.

While the unit-scaled self factors—due to their high intercorrelations—exhibit the same consistent pattern of relating to Openness of experience, we see a differentiation occurring when examining the regressed self factors. Using these factors, which are by definition independent, Openness is associated with the two Future related self factors only. Thus, individuals with higher personal inclinations towards new experiences are also more likely to engage in projects that reflect striving towards a changed self, be it improved (Future-better) or different (Future-other).

The only other association observed is between Past self-aspects and Agreeableness. One explanation for this could be that individuals who are highly agreeable are also hesitant to change. Change is risky for persons marked by high scores on Agreeableness—the new self may not receive the same level of approval from the environment as the old and cozy one does. The personal project systems of these respondents reflect greater investment of time and energy in projects related to preservation and re-establishment—stability over change.

In terms of the relationship between traditional dimensions and factors with personality indicators, we observe a strongly positive correlation between the Stress

Table 28

Pearson-correlations between personality variables and personal project factors (N = 184)

	Personality				
Factor	E	A	C	N	O
			Regressed Factors		
Traditional Factors					
Stress	-.11	.01	-.06	.30***	.07
Efficacious	.10	.09	.29***	-.09	.17*
Involvement					
Identity/Culture	-.14^	.06	-.01	.00	.28***
Community	.11	.04	-.01	-.05	-.09
Structure	.19**	.22**	.04	-.17*	.13^
Self Factors					
Future-Other	-.10	.03	-.09	.08	.15*
Present	.03	-.06	-.01	.01	.11
Future-Better	-.09	.02	-.08	.07	.28***
Past	.09	.17*	.11	-.05	.10
			Unit-scaled Factors		
Traditional Factors					
Stress	-.11	-.04	-.05	.25**	.04
Efficacious	.10	.14^	.23**	-.08	.24**
Involvement					
Identity/Culture	-.06	.09	.09	-.08	.29***
Community	.08	.11	.08	-.04	.02
Structure	.20**	.23**	.05	-.25**	.19*
Self Factors					
Future-Other	-.07	.07	-.06	.08	.29***
Present	-.02	.00	-.05	.05	.24**
Future-Better	-.06	.07	-.07	.06	.37***
Past	.02	.14^	.05	.01	.27***

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; O = Openness.

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

related dimensions and Neuroticism, as well as a negative and lower correlation between two of the Stress dimensions and Extraversion. Efficacious Involvement seems to combine two aspects: one related to Conscientiousness (Distractibility and Commitment), the other to Openness (Progress, Project Stage, and Absorption). The Identity/Culture dimensions have strong associations with Openness (similar to the self dimensions), and also relate to Conscientiousness (Self-identity and Enjoyment). From the Community dimensions, Support is related to Agreeableness, possibly indicating that people who are likely to provide support to others (i.e., those who are agreeable) may also be more likely to receive support from others. Visibility, also a Community dimension, is similarly associated with Extraversion. This makes intuitive sense in that extraverted people may be more apt to share their project system with others and thereby be more likely to have "communal" projects. The dimensions comprised in the Structure factor of our solution exhibit diverse relationships to most of the personality factors: Initiation relates to Agreeableness and Openness, while Control and Outcome both relate directly to Extraversion, to Agreeableness, and inversely to Neuroticism. The conceptual Structure dimensions are unrelated to Conscientiousness, although there is a statistical trend for Outcome to positively correlate with this factor. We will discuss these relationships with respect to previous reports in the literature in the discussion section.

On the factor level (see Table 28), we observe a very selective and intuitively meaningful pattern of relationships between the regressed traditional factors and the big five personality characteristics. Stress is moderately associated with Neuroticism, whereas Efficacious Involvement is moderately related to Conscientiousness and to

Openness, which might, once again, reflect the two aspects of efficacy on the one hand and meaning on the other that are combined in this factor.

Identity/Culture—like the self dimensions—relates to Openness to Experience. The combined Community factor does not show any relationships with Extraversion or Agreeableness, nor does it relate to the other three personality factors. Finally, Structure relates to Extraversion and Agreeableness positively, and to Neuroticism negatively.

The pattern of results for the traditional factors with regressed and unit-scaled factors is very similar, while for the self factors we observe a greater differentiation with the regressed factors, which is likely due to the higher intercorrelations among self-dimensions being expressed in the unit-scaled factors (compare Appendix H, and Table J1, Appendix J).

Relationships of Academic and Interpersonal projects to personality. To compare the relationship between personal projects and personality in this study in more detail to previously reported data (Little et al., 1992), personal project ratings were also averaged across Academic and Interpersonal projects separately, and relationships of these ratings with the Big Five personality factors were examined. Table 29 displays Pearson-correlations between the 29 rating dimensions and each of the five personality factors, Table 30 displays these relationships on the factor (unit-scaled) level.

Dimension level. Examining Table 29 reveals conceptually interesting differences in the pattern of relationships between the ratings of Academic projects to personality and these relationships in the Interpersonal project domain. For the traditional dimensions, those ascribed to the factors Efficacious Involvement and Identity/Culture show divergent patterns. First, most dimensions ascribed to the factor Efficacious Involvement are related

Table 29

Pearson-correlations of personality characteristics with personal project dimensions for Academic and Interpersonal projects

Factor	Academic (N = 167)					Interpersonal (N = 124)				
Dimension	E	A	C	N	O	E	A	C	N	O
Number of projects	-.05	.01	.11	.08	-.19*	-.03	.01	.11	.18*	-.07
Stress										
Difficulty (SE)	-.07	-.05	-.11	.12	.11	-.12	-.12	-.02	.19*	-.13
Stress (SE)	.00	-.13	-.11	.29***	-.03	.00	-.01	-.04	.21*	-.07
Challenge (SE)	-.05	-.05	-.02	.04	.07	-.17^	.00	-.11	.24**	-.07
Negative impact (SU)	.06	-.15^	-.01	-.10	.06	.06	-.01	.07	.03	-.10
Efficacious Involvement										
Distractibility	-.07	-.16*	-.43***	.19*	-.16*	-.11	-.29**	-.10	.09	-.07
Progress (EF)	.05	.12	.25**	-.14^	.20**	-.01	.01	-.01	-.02	-.01
Commitment	-.01	.15^	.23**	-.05	.14^	-.01	.21*	.13	.11	-.02
Project Stage	.00	.05	.21**	-.04	.15^	-.08	-.06	.03	-.03	-.03
Absorption (M)	-.03	.06	.14^	.00	.18*	.08	.13	.13	.10	.01
Importance (M)	-.08	.03	-.08	.08	.17*	.05	.18*	.01	-.05	-.01
Identity/Culture										
Self-identity (M)	-.12	.04	.06	.09	.13	.06	.23*	.00	-.11	.20*
Value-congruency (M)	-.09	.00	.07	.01	.24**	-.02	.28**	.00	.04	.18*
Community/Culture	-.09	-.05	-.02	-.15^	.19*	-.06	.05	-.05	-.05	.13
Enjoyment (M)	-.03	.14^	.23**	-.17*	.16*	-.07	.20*	.06	-.12	-.01
Community										
Support (CO)	-.02	.09	.17*	-.14^	.03	.08	.13	.17^	-.03	-.21*
Others' View of Importance (CO)	-.08	.06	.07	-.08	.17*	-.08	-.06	.09	.21*	.00
Visibility (CO)	-.02	.08	.02	-.07	.22**	.20*	-.15^	.04	.03	-.10
Structure										
Control (SU)	.08	.12	-.02	-.14^	.09	.15^	.09	.03	-.23*	.13
Initiation (SU)	-.07	.08	-.09	-.03	.11	.06	.26**	.01	-.06	.19*
Outcome (EF)	.08	.21**	.17*	-.11	.06	.14	.25**	.10	-.17^	.01

Table 29 (cont'd)

Factor	Academic (N = 167)					Interpersonal (N = 124)				
Dimension	E	A	C	N	O	E	A	C	N	O
Future-Other Self										
Experimentation (S)	.12	.10	.06	-.12	.12	-.27**	-.12	.01	.21*	-.01
Exploration (S)	.14^	.14^	.03	-.10	.19*	-.02	.03	.00	.07	.07
Extension (S)	.06	.14^	-.03	-.07	.25**	-.04	-.04	-.03	.07	.03
Present Self										
Centrality (S)	.03	.01	-.02	-.08	.14^	.03	.14	-.10	.07	.13
Expression (S)	.09	.10	.09	-.08	.18*	-.05	-.03	-.05	.04	.03
Future-Better Self										
Improvement (S)	.12	.16*	-.07	-.09	.31***	-.15	-.06	-.09	.15^	.23*
Enhancement (S)	.11	.18*	.00	-.15^	.30***	-.02	.12	.03	-.08	.13
Past Self										
Preservation (S)	.03	.18*	-.07	-.12	.25**	.12	.17^	-.01	-.08	.03
Re-establishment (S)	-.03	.06	-.04	.00	.14^	.07	.13	.14	-.03	.14

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; O = Openness. Dimensions are conceptually assigned to: SE = Stress; SU = Structure; EF = Efficacy; M = Meaning; CO = Community.
^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 30

Pearson-correlations between personality variables and personal project factors for Academic and Interpersonal projects

	Academic (N = 167)					Interpersonal (N = 124)				
Factor	E	A	C	N	O	E	A	C	N	O
Traditional Factors										
Stress	-.02	-.14^	-.09	.12	.08	-.07	-.05	-.03	.22*	-.12
Efficacious	.01	.14^	.31***	-.10	.24**	.05	.20*	.09	.00	.01
Involvement										
Identity/Culture	-.12	.04	.11	-.08	.25**	-.03	.26**	.00	-.09	.18*
Community	-.05	.09	.10	-.11	.17*	.11	-.04	.13	.08	-.14
Structure	.02	.17*	-.01	-.12	.13	.15	.24**	.06	-.20*	.15
Self Factors										
Future-Other	.12	.14^	.02	-.11	.21**	-.13	-.05	-.01	.14	.03
Present	.07	.06	.04	-.09	.18*	-.01	.06	-.09	.07	.08
Future-Better	.12	.19*	-.04	-.13^	.33***	-.11	.02	-.03	.06	.22*
Past	.00	.13^	-.06	-.06	.22**	.11	.17^	.07	-.07	.10

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; O = Openness.

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

moderately to Conscientiousness as well as to Openness (and one to Neuroticism) in the Academic domain, while in the Interpersonal domain such relationships are only observed with Agreeableness. Three of the Identity/Culture dimensions (Self-identity, Value-congruency, and Enjoyment) also relate moderately to Agreeableness in the Interpersonal realm, but are not related for Academic projects. While Value-congruency relates to Openness in both domains, Self-identity only does so for Interpersonal projects, and Community/Culture and Enjoyment only relates in the Academic domain. In the Academic domain only, Enjoyment is also related to Conscientiousness and, inversely, to Neuroticism. In fact, all of Little's Meaning dimensions relate to Openness when considering Academic projects, while only the more identity-related ones (Self-identity and Value-congruency) are related to Openness in the Interpersonal domain.

Interesting differences also emerge for the Community dimensions. It was expected that Extraversion would be more strongly related to some of the personal project dimensions in the Interpersonal domain, while exhibiting fewer relationships with Academic projects. Relationships are, in fact, absent for Academic projects, yet it is surprising that only one dimension, Visibility, relates to Extraversion in the Interpersonal domain. This suggests that Extraverts do not identify more with Interpersonal projects, or even name more such projects, but rather engage in these projects in a more visible way than their less extraverted counterparts. Support relates to Conscientiousness in both domains, but relates negatively to Openness in Interpersonal projects. We will explore possible interpretations of this unexpected relationship in the discussion section. Others' View of Importance is related to Neuroticism in Interpersonal projects, whereas it relates (together with Visibility) to Openness in the Academic domain.

Finally, Initiation relates to Agreeableness and Openness in the Interpersonal domain only, and Outcome is related to both Agreeableness and Conscientiousness in the Academic domain, while only relating to Agreeableness in the Interpersonal domain.

The self dimensions (Table 29) keep their relationship to Openness only in the Academic domain, not, however, in the Interpersonal domain (with the exception of Improvement). A moderate negative correlation was found between Extraversion and Experimentation in the Interpersonal domain only. Since Extraverts could be expected to be quite proficient socially, they may not have much need to experiment with Interpersonal projects. Neuroticism, on the other hand, is related to Experimentation in that domain, possibly reflecting attempts by individuals with higher neuroticism to improve social behaviors. Finally, Agreeableness is associated with being engaged in Academic projects aimed at improving or enhancing aspects of the self, as well as with using Academic projects to maintain or preserve aspects of the self. For Interpersonal projects, such a tendency is only indicated as a statistical trend between Agreeableness and Preservation.

Factor level. On the factor level (see Table 30), only Identity/Culture and Future-Other are related to Openness in Interpersonal projects, whereas all factors but Stress and Structure are found to be related to Openness for Academic projects. This divide between factors which do and don't relate to Openness in the Academic domain mirrors the meaning/structure differentiation observed with the pattern of relationships with subjective well-being discussed as the meaning/manageability tradeoff. None of the personality characteristics relates to Academic stress, yet Neuroticism predicts stress experienced and structure associated with projects in the Interpersonal domain.

Agreeableness relates to higher Structure in both Academic and Interpersonal domains, and predicts levels of Future-Better orientations in the Academic domain, and Efficacious Involvement and Identity/Culture in the Interpersonal domain. Finally, Conscientiousness is only related to Efficacious Involvement in Academic projects.

Differential Relationships between SWB, Personality, and Personal Projects

As indicated earlier, we are interested in how these relationships may differ depending on a person's preferred self-continuity strategy. Hence, we have related the five traditional and four self related personal project factors with both SWB and personality characteristics for our Narrative and Essentialist participants separately. The sub-sample of interview participants also completing the SWB and personality measures included 54 participants, 32 of whom were identified as employing an Essentialist, and 22 as using a Narrative strategy. Table 31 displays these relationships with regard to subjective well-being, and Table 32 presents the relationships with personality factors separately by group. Since this is a relatively small sample, and because we expect the relationships to be in the same direction as observed on the overall group level, we adopt a one-tailed significance criterion of alpha = .05.

Subjective well-being. With regard to Stress, we find relationships of a similar magnitude for both Essentialists and Narrativists as was observed for the overall group (compare Table 26). With the total group, positive affect and affect balance were both related to Efficacious Involvement and Structure. These relationships are not replicated in either group for Efficacious Involvement, but appeared as a statistical trend for Structure in the Narrative group. The most distinct differences between groups, however, are

Table 31

Pearson-correlations between subjective well-being indicators and regressed personal project factors for Essentialists and Narrativists

	Essentialists ($N = 32$)				Narrativists ($N = 22$)			
Factors	LS	PA	NA	AB	LS	PA	NA	AB
Traditional Factors								
Stress	-.21	-.34*	.39*	-.46**	-.37*	-.25	.40*	-.36*
Efficacious Involvement	.01	.04	-.01	.03	-.18	.12	-.20	.18
Identity/Culture	-.21	-.08	.05	-.07	.11	.37*	-.48*	.48*
Community	.14	.36*	-.21	.35*	.19	.32^	-.11	.24
Structure	.08	.15	.16	-.02	.24	.28	-.26	.30^
Self Factors								
Future-Other	-.08	-.15	.21	-.23	-.15	-.04	-.21	.10
Present	-.02	.08	-.06	.09	.09	.35^	-.24	.33^
Future-Better	.12	-.02	.08	-.06	-.30^	-.26	.14	-.22
Past	.06	.39*	.02	.21	.00	.35^	-.24	.33^

Note. LS = Life Satisfaction, PA = Positive Affect, NA = Negative Affect, AB = Affect Balance.

^ $p < .10$. * $p < .05$. ** $p < .01$ (1-tailed).

Table 32

Pearson-correlations between personality characteristics and regressed personal project factors for Essentialists and Narrativists

	Essentialists ($N = 32$)					Narrativists ($N = 22$)				
Factors	E	A	C	N	O	E	A	C	N	O
Traditional Factors										
Stress	-.29^	.01	.00	.40*	.07	-.02	-.09	.34^	.18	.36^
Efficacious Involvement	-.16	-.13	.24^	.22	-.11	.03	.28	.19	-.24	.41*
Identity/ Culture	-.28^	.08	-.02	.18	.08	-.17	.33^	-.08	-.29^	.46*
Community	.06	.02	-.14	-.24^	-.24^	.08	-.03	.06	-.20	.07
Structure	.44*›	.23	.14	-.07	.29^	.07	.42*	-.17	-.01	.08
Self Factors										
Future-Other	-.27^	.17	-.24^	.18	.03	-.24	.13	-.01	-.30^	.44*
Present	-.01	-.06	.06	.13	-.02	.08	.31^	.12	-.13	.08
Future-Better	-.21	.44*›	-.06	.09	.30*	-.12	-.35^	-.04	.19	.38^
Past	.34*	.18	.02	-.36*	.24^	.18	.28	.28	-.27	.46*

Note. E = Extraversion; A = Agreeableness; C = Conscientiousness; N = Neuroticism; O = Openness.

^ $p < .10$. * $p < .05$. ** $p < .01$ (1-tailed).

observed with regard to the factors Identity/Culture and Community. For Narrativists, relationships of all three affect indicators with Identity/Culture are among the strongest correlations with effects of a moderate to large magnitude. For Essentialists, such relationships are completely absent. For Essentialists, by contrast, Community is a stronger predictor of positive affect and affect balance, while for Narrativists—although indicated by a trend for positive affect—Community aspects seem to have a lesser impact on SWB. Relationships for these two factors are essentially absent when considering the overall group (Table 26), save for a statistical trend of Community with life satisfaction and positive affect. This result may be due to the confounding of Essentialists and Narrativists in that sample, of which—given the cultural demographics—a higher number can be expected to use Essentialist self-continuity warranting strategies, hence contributing to a higher relevance of Community over Identity/Culture to SWB on an aggregated level. For the self-related factors, relationships were only found with regard to positive affect, particularly so for Present self. While for Essentialists the only significant correlation is in fact observed with positive affect (however with Past self rather than Present self), for Narrativists a broader pattern of relationships is observed, however, as statistical trends only. As such, both Present and Past self are related to positive affect and affect balance, while Future-Better is related (inversely) to life satisfaction. In terms of sign, Future-Better exhibits the same pattern as Stress, indicating that entertaining projects that are particularly focused at improving the self, may be especially taxing on personal well-being.

Personality factors. With regard to Personality, we observed moderate but distinct correlations of traditional personal project factors with each of the Big Five factors. Of

the self factors, only the two Future oriented ones were related to Openness, and Past self related to Agreeableness. The pattern of relationships for Essentialists and Narrativists differs, but not in immediately obvious ways. From among the 12 significant relationships ($p < .05$ or higher) observed in both groups, only one in each group is replicated as a statistical trend in the other group (Future-Better and Past self relate to Openness in both groups). A third significant *direct* relationship (Future-Better with Agreeableness) in the group of Essentialists, maps onto a trend of an *inverse* relationship in the Narrative group. Further, among the 22 additional relationships indicated by statistical trends, none is replicated in the other group. In other words, based on this sample of 32 Essentialists and 22 Narrativists, the influence of personality characteristics on the construction of personal projects is dependent on what type of self-continuity warranting strategy one adheres to. For example, for Essentialists, Extraversion is associated with various of the traditional and self factors, while such relationships are altogether absent for Narrativists. In addition to agreeable Essentialists having projects rated higher on Future-Better, while agreeable Narrativists exhibit the opposite pattern, several other relationships with Agreeableness are observed for Narrativists but not for Essentialists. Conscientiousness is related to higher Stress for Narrativists, and to higher Efficacy and lower Future-Other for Essentialists. Neuroticism, surprisingly, is only related to Stress for Essentialists, where it also relates inversely to Community and Past aspects. For Narrativists, Neuroticism is related to low Identity/Culture and low Future-Other. Finally, Openness is related to several factors in both groups: In addition to the shared relationships with Future-Better and Past self, Openness relates to Community (negatively) and Structure (positively) for Essentialists, and exhibits strong positive

correlations with Efficacious Involvement, Identity/Culture, and Future-Other, as well as with Stress, in the Narrative group. Overall then, a differential connection of the factors Identity/Culture (stronger for Narrativists) and Community (as trends only)—similarly to the SWB domain—can also be claimed for personality characteristics. In addition, Openness seems to have a larger influence on the construction of personal projects in the Narrativist group, as compared to the Essentialists.

Intercorrelations of Personality Characteristics and Subjective Well-Being

Finally, it is worth taking a look at how the personality characteristics relate to the indicators of subjective well-being assessed in the current study. Table 33 displays Pearson-correlations between and within these two domains.

Overall, Neuroticism has the largest associations with all four subjective-well being indicators, followed by Extraversion with moderate associations. Agreeableness and Conscientiousness are also consistently related (only as a statistical trend between Agreeableness and Life Satisfaction, however). Openness is the only personality factor not related to life satisfaction and negative affect, but exhibits moderate relationships with positive affect. Since Openness also relates to many of the Meaning and self-related dimensions of personal project appraisal, which in turn relate to subjective well-being, this may be the route through which these constructs are linked.

Table 33

Pearson-correlations between and within subjective well-being indicators and personality characteristics (N = 184)

Variable	1	2	3	4	5	6	7	8	9
Subjective Well-Being									
1 Life Satisfaction	—								
2 Positive Affect	.52***	—							
3 Negative Affect	-.22**	-.38***	—						
4 Affect Balance	.44***	.83***	-.84***	—					
Personality									
5 Extraversion	.30***	.36***	-.15*	.31***	—				
6 Agreeableness	.14^	.22**	-.22**	.27***	.14^	—			
7 Conscientiousness	.19**	.19*	-.15*	.20**	.13^	.21**	—		
8 Neuroticism	-.36***	-.47***	.64***	-.67***	-.35***	-.27***	-.16*	—	
9 Openness	.10	.28***	-.12	.23**	.21**	.23**	-.01	-.13^	—

^ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$ (2-tailed).

Discussion

Introduction

The overall objective of this project, as outlined in the introduction, was to find preliminary answers to a set of four questions: How are conceptions of the self reflected in our everyday actions? Conversely, can our routine lists of daily projects and personal strivings–the nitty-gritty of our personal lives–tell us anything about implicit conceptions of personhood? How do such projects function to maintain or modify our implicit understanding of ourselves? And finally, how are abstract conceptions of selfhood related to other aspects of self such as subjective well-being and personality structure?

The first two questions above are really flip sides of the same coin, at least in the context of the current cross-sectional examination. The short answer to both these questions is, yes: the personal project systems of those who take an Essentialist approach to the problem of self-continuity differ from those of their Narrativist counterparts. These differences are apparent not in overall project appraisals but rather in the ratings associated with particular project contents. That is, Essentialists and Narrativists experience similar levels of meaning, community, structure, efficacy, and stress in conjunction with their personal projects, however, the types of projects Essentialists and Narrativists use to achieve their needs for agency and communion and the ways in which these projects balance meaning and manageability differ.

The same pattern appears in the ways in which Essentialists and Narrativists make differential use of personal projects to maintain or modify their implicit conceptions of themselves. Again, both groups use their overall project systems to bring about self-preservation as well as self-change. However, it is again in the minutiae of the specific

types of projects that are most relevant to these functions that separates Essentialists from Narrativists.

The response to the final question, whether self-continuity reasoning covaries with personality characteristics and subjective well-being, also is a qualified yes. While there is no difference in the overall levels of well-being experienced in either group, nor in their particular constellations of personality characteristics, group differences are observed in the relationship between personal project appraisal and these other self-related measures.

The plan for this discussion is to take up each of these themes in turn. I begin with the personal projects data by evaluating the comparability of our factor solutions to previously supported factor structures, as well as the congruency of project and participant level solutions. Then I discuss the theoretical implications of the observed structural features of the self-related dimensions, and the interrelations of what I referred to as traditional and self factors. Attention is then turned to the main research question and to the differences observed between Essentialists and Narrativists. This is followed by an evaluation of the implications of the relationships between personal project appraisal and subjective well-being as well as personality characteristics, both for the overall sample, as well as with regard to differential relationships for the Essentialist and Narrative interview participants. Finally, I will conclude by commenting on the scope of the contribution of this research to the study of identity development, point out limitations of the current study, and provide a set of suggestions for further research.

I. Structural Properties of Traditional Dimensions and Structural Equivalency Across Levels

In this and the following section, I discuss four interrelated aspects of the structural analyses performed. The first two relate to the traditional PPA dimensions included in the current study. First, I compare and contrast the data structure derived from the traditional dimensions with structures previously reported in the literature, and second, I comment on the extent to which structural relationships observed on the participant or nomothetic level of analysis hold true for the project level (and explain why we should care about such questions of structural equivalency). The second set of questions (presented in Section II) refer to the self-dimensions included in this study. There I will summarize the structural properties of the self dimensions, and then examine how they relate to Little's traditional factors.

Structural Properties of Traditional Dimensions

The answer to the question of whether the structure of our Personal Project Analysis data match findings from the PPA literature is a qualified yes. The qualification refers to the fact that the modular nature of personal projects methodology–which allows for addition and subtraction of evaluation dimensions according to demand–precludes reports of consistent factors in the literature. Still, Little (1987b) notes, that "factor analytic investigations have generally supported the presence of these categories [the five factors of Meaning, Structure, Community, Efficacy, and Stress], though the specific dimensions which emerge differ from study to study" (p. 236). In the current study, we do see both evidence for the suggested conceptual structure (in the replication of Little's

Community, Structure, and Stress factors), as well as divergence from it (with regard to Little's Meaning and Efficacy factors).

In the current study, on both the participant and project level, the dimensions that constitute Little's Meaning factor, split across two different factors: Identity/Culture and Efficacious Involvement. The Identity/Culture factor captures the traditional meaning dimensions of Self-Identity and Value-congruency, together with Enjoyment, and Community/Culture. The other traditional Meaning dimensions (Absorption and Importance) are part of the Efficacious Involvement factor (together with Distractibility, Commitment, Progress, and Project Stage).

Little (1988) also noted that *Efficacy* does not always appear as a unitary factor, and concluded that "while progress and outcome can be conceptualized as past and future forms of perceived competency, they define different latent dimensions of rated personal projects" (p. 20). In the present study, the past related aspect (Progress) relates to the extent that an individual's overall project system is efficaciously pursued, while the future form of perceived competency (Outcome) is predictable from the extent to which a person has a sense of ownership (Initiation) and control over his or her project system. Little's (1988) findings parallel these relationships for Outcome, while the dimensions associated with Progress in the current study were not included in Little's data set.

The division of Little's *Meaning* factor across the Efficacious Involvement and Identity/Culture factors in the current solution suggests that different accentuations of 'meaning' are at work here: Identity/Culture captures the *source* of meaning for a project–sometimes personal (agentic), other times rooted in cultural needs (communal) – while Efficacious Involvement provides an index of the *process* of becoming engaged in

a project–the meaning a project takes on as one becomes progressively more committed to it and more heavily invested in its successful completion. A project is 'meaningful' not only because it reflects my values or serves to connect me to others, but also, and more simply, because it is mine, reflecting a sense of agency and ownership that grows over time.

The Identity/Culture factor seems to capture both sides of Bakan's (1966) classic distinction between agency and communion. Agency is expressed in the personal meaning dimensions of Self-identity and Value-congruency, while communion is seen in the extent to which a project conveys or reflects a sense of connection to a person's community or culture (expressed in the Community/Culture dimension). In contrast to Little's Community factor (Visibility, Other's View of Importance, and Support), which captures the more tangible or practical facets of community, the Identity/Culture factor in the current solution supplements this notion of communion with a more abstract sense of belonging by including a person's unique way of gaining and sustaining a connection to whatever it is that provides a sense of membership in their culture or group.

Though Little notes that his factor structure is "generally supported," this is not the first investigation to derive a different solution. In fact, considerable variability exists in the literature, not only with regard to the specific dimensions that load onto any factor, but also with the number of factors derived. Salmela-Aro (1992), for example found four factors, Pychyl and Little (1998) report just three. Some of this variability is due to the 'modular' nature of the instrument itself–researchers are encouraged to add and subtract dimensions to better suit their particular theoretical purposes. Salmela-Aro's failure to find the Community factor, for example, is likely the result of having included only one

of the dimensions (Visibility) that typically construct the Community factor. The source of many of these reported differences, however, is often to be found in the behaviour of the Meaning and Efficacy factors–that is, on precisely the same factors that distinguish the current findings from Little's factor structure.

In all, with reference to the existing PPA literature, the current factor structure amounts to a refinement rather than a departure. Many studies employ either a subset of the core dimensions (e.g., Salmela-Aro, 1992), or include ad hoc dimensions (e.g., McGregor & Little, 1998), or use Little's five conceptual factors as a priori factors for variable reduction (e.g., Christiansen et al., 1998). Under these circumstances, we cannot reasonably expect a single and consistent factor structure to emerge. In the current study, in which most of the core dimensions were used, and several new ones added, three of Little's five factors were replicated (Community, Stress, and Structure). The realignment of Little's Meaning and Efficacy into the Identity/Culture and Efficacious Involvement factors in the current study no doubt reflects the specific emphasis in the current instrument on the struggle between agency and communion.

Structural Equivalency Across Levels of Measurement

Little (1988) argues that, depending on the focus of a study, it may be appropriate to analyze personal project matrices at the level of mean column scores, whereas for other analyses, the project itself may be the more appropriate unit of analysis. It is under the assumptive theme of consiliency, that Little (2000b) formally calls for conjoint individual and normative levels of measurement to promote the integration of knowledge

derived from different types of contexts, and attempt to overcome–or at least constrain–the dangers associated with moving between levels of conceptual analysis.

Various procedures have been proposed to evaluate structural equivalency across levels of measurement—such as the project and participant levels compared in the current study. Gee (1998) used multidimensional scaling procedures to examine Simpson's paradox within personal project methodology (i.e., the mathematical notion that "relationships between a set of variables measured at one level of analysis are not mathematically constrained to hold at other levels of analysis", Little, 2000b, p. 85). Little (1988) examined similar issues of structural equivalency by comparing factor solutions elicited at the participant and project levels.

While Gee (1998) found strong evidence for isomorphism on both levels of measurement, Little (1988) reports differences with regard to the number of factors derived and concluded that project system ratings have a more complex dimensionality. In explaining the higher complexity on the participant level, Little suggested that individuals build compensatory and adjustive tradeoffs into their project systems, so that "the extreme project characteristics get evened out and variance occurs more around the substantive dimensions of personal and social meaning" (Little, 1988, p. 25).

In the current study, we needed to evaluate the structural equivalency between the two levels of measurement to determine the strength and generalizeability of conclusions drawn from the observed relationships and differences with regard to Essentialists and Narrativists. While project level structural relationships can tell us about the pattern of project evaluations on a more molecular level, patterns of ratings averaged across all of an individual's projects tell us about the properties of entire project systems. It might

have been the case that these two analytic approaches would yield quite different results. That is, particular projects could be seen to serve this or that self function, but the only thread connecting the overall collection of projects engaged in by any one person might be that they appear on that one individual's data sheet. In such circumstances, an "evening-out" of extreme scores as discussed by Little (1988) could occur and might yield different results on the two levels.

If that were the case, if the term "project system" referred only to the arithmetic sum of someone's project ratings rather than to a meaningful "system" of projects, then the argument that deep-seated ways of understanding the self are expressed in routine everyday projects (the main hypothesis of the study) would be seriously weakened, or at least, constrained to one or the other level of analysis. Instead, both the project and system level analysis point in the same direction. With very small exceptions, there is an overarching conceptual and structural congruence in the participant and project level analyses, both with regard to the number of factors derived and the specific constellation of dimensions.

Most of the studies using personal project analysis focus on the participant level, usually in an attempt to investigate participant level relationships between personal project appraisal and other variables nomothetically (e.g. SWB, Personality). For that reason, it is impossible to compare the similarities found in the current study between project and participant level data to these other studies. For the current investigation, however, we can conclude that participants used their individual projects and whole project system in similar ways to achieve meaning and manageability, and–as I will show shortly–that this congruence across levels extends to how people meet their needs of self

expression, change, and preservation. This allowed us to concentrate our efforts on one level of analysis, and still make the more general claim that the observed relationships hold on both levels of measurement. For example, since levels of Control and Initiation covary–both within a single project as well as within entire project systems–we can evaluate the relationships between these Structure dimensions and other variables on the participant level only, and assume that the results apply to the project level as well.

II. Structural Properties of Self Dimensions and Interrelation with Traditional Factors

Having established the extent to which the traditional dimensions in the current study form factors similar to those observed in the literature, and having made the case for farreaching equivalency across levels for these factors in the previous section, we now turn our attention to the self dimensions included in this research. I will first examine the evidence with regard to our hypothesized temporal alignment of self-dimensions (Past, Present, Future self, compare Figure 1), and then turn to the interrelations between the self and traditional factor domains.

Hypothesized Temporal Alignment of Self Dimensions

Recall from Figure 1 that the nine self related dimensions were hypothesized to reflect the manner in which personal projects are used to express central aspects of the current self (*Present*: Centrality, Expression, Exploration), to bring about changes to the self (*Future*: Experimentation, Extension, Improvement, Enhancement), and to preserve or regain valued aspects of self (*Past*: Preservation, Re-establishment). In an evaluation of this hypothesis using exploratory factor analyses, we found that all of the self-related

dimensions are highly intercorrelated, resulting in a one-factor solution. This suggests that projects that are generally experienced as 'closer to home' relate fairly consistently to all of these factors. In other words, while some projects may be not relevant to any of these self-functions, others simultaneously serve present, past, and future self-functions. Interestingly, however, eliciting 2, 3, and 4-factor solutions yielded support for the more finely grained structure of our hypothesized temporal alignment with two noteworthy exceptions.

First, Exploration, which we had imagined would constitute a function of the Present self, relates instead with the future oriented factors. Our working definition of exploration included processes of reflecting about one's personality or self–a sort of stock-taking exercise–while our participants clearly conceived it as an activity closer to experimentation: it seems to have been understood as more external than internal and as having to do with where they imagine themselves going rather than where they have been. Secondly, our hypothesized future-related dimensions generated two factors rather than one–Improvement and Enhancement are about improving on negative aspects or enhancing positive ones even further, in short 'becoming a *better* self' (i.e., Future-Better), while Experimentation, Extension, as well as Exploration build a separate factor capturing self functions that are more oriented towards 'becoming a *different* self' (i.e., Future-Other).

Our assumption in adding these self-related dimensions to personal projects analysis was that desired or feared (e.g., Possible Selves, compare Markus & Ruvolo, 1989) changes–and possibly even incidental changes–to our own identity are brought about through everyday personal projects and undertakings which can be conceptualized

and assessed as conative units of analysis (Little, 1993). As indicated by philosophical writings and the self-continuity literature (reviewed in the Introduction), however, we are also required to re-identify with previous versions of ourselves through such changes, spanning the elapsed time from our past selves to the future ones. It is precisely in this intersection, where conative projects are brought into being, that we also expect deeply ingrained self-conceptions about persistence in time to intersect with these nascent action plans and goals. But, just as these goals aim to change aspects of the self (or work to coincidentally bring about such changes), measures are also taken–possibly in form of another goal, or even a different aspect of the same project–to ensure that the change is not perceived as detrimental to one's own persistence in time. Since Essentialists and Narrativists operate on the basis of different conceptions of continuity, the strategies or goals they implement for maintaining continuity are also likely to differ. It is for this reason that we expected to find differences between Essentialists and Narrativists in the use of personal projects to bring about change and in the ways that self-continuity is preserved in spite of change.

The high intercorrelations between self-functions indicate that both projects and project systems typically serve all four of the self-functions–though usually with differing degrees of emphasis on any one function. That is, at the micro-level (project level analyses), a project may emphasize the Future-Better self function, while at the same time maintaining some minimal threshold level of focus on the other self functions. Similarly, at the macro-level (project system level analyses), the project system of a person also comprises all four self functions and aims to achieve a balance among them. Hence, people seem to achieve coherence both within and across their projects, rather

than dedicating part of their project system towards change and other parts towards sameness. Sameness and change are on the agenda for everybody, in every project, and the whole project system at any given point in time.

Similar to the traditional dimensions, there is also a close correspondence between the project level and participant level factor solutions for the nine self-dimensions. In fact, only Enhancement was assigned to a different factor due to a slight shift in factor loadings.

Interrelation between Self and Traditional Factors

A final interest in examining structural properties of the personal project data was to examine the interrelations between the factors derived from the traditional dimensions, and those representing the self-dimensions. This was accomplished by correlating the traditional and self factors, as well as by exploratory factor analysis of the total set of 29 dimensions.

Viewed from the angle of traditional factors, the strongest and only consistent relationship to all four self factors is with *Identity/Culture.* Projects that are rated high on this factor–a factor that combines agency and communion as it is both rooted in a person's innermost sense of self *and* belonging to one's community–are also the ones used to achieve past, present and future self related goals. From the opposite angle, *Present* self exhibits the strongest connection to all traditional factors (except Structure). It seems that these two axes, Present self from the Self domain and Identity/Culture from the traditional factors, build a central nexus through which the two domains are linked.

As *Future-Other* self functions are about exploring and experimenting, that is, trying new ways of being, it makes sense that they are evaluated as stressful and show a lack of structure. Like all other temporal self functions, they are rooted in a person's sense of self and belonging. Like Future-Other, *Future-Better* is also stressful, although to a lesser degree, but unlike Future-Other, these projects do not consistently lack structure, possibly because the goals of these projects are more clearly defined and high in personal meaning (both agentic and communal, as expressed in the moderate correlation with Identity/Culture).

Past self related functions (Preservation and Re-establishment) are unrelated to the 'organizational' factors of Stress and Structure. Past self functions seem to be related to meaning and people, as they relate to factors 2 through 4, those comprising the Meaning and Community dimensions. From a conceptual perspective, this self-function may be the most central to self-continuity, since it is the one where aspects of the self that are selected to be preserved or regained–intuitively the most likely candidates for achievement of continuity–are most directly tapped. The absence of a relationship to Stress or Structure indicates that they can be either easy or difficult, but they are always engaging commitments (Efficacious Involvement), they reflect one's own inner sense of self and sense of belonging to one's community (Identity/Culture; representing self-agency), and they are visible to and supported by one's relevant environment (Community; other-agency).

Overall then, when evaluating the relationship of the traditional personal project factors with the self-functions combined to temporal and functional factors as outlined in Figure 2 (see also Table 6), differential relationships emerge. While most traditional

factors (except Structure) relate to the Present self functions as a central nexus, the Past self functions center on Meaning and Community, while the projects having to do with the future self are more stressful and, in part, less structured.

Finally, a factor analysis including all traditional and self related dimensions replicated two of the traditional factors precisely, and the two remaining factors remain with the addition or subtraction of a single dimension. Including the self dimensions with the traditional dimensions has the greatest impact on the Identity/Culture factor. Its Community/Culture dimension is highly related to the nine self dimensions on the one hand (building the factor explaining the most variance), but also to the traditional identity dimensions Self-identity and Value congruency. Hence, the Community/Culture dimension represents a nexus through which these conceptually related but empirically distinct dimensions interact. In the current sample, the types of projects that are deemed most central to one's sense of identity and cultural belonging are (in descending order of importance): Interpersonal, Leisure, Health, Intrapersonal, Academic/Occupational, and Administrative. It may seem surprising, given that the participants are all university students, that academic/occupational projects appear near the end of the list. It may be that these projects will become more meaning-laden with time as these first-year students gain a greater sense of commitment to their chosen professions.

This strength of the Identity/Culture factor provides an empirical structure for Chandler et al.'s (2003) attempt to connect measures of self-continuity with measures of cultural continuity. It suggests that the methods used in the current study may provide a way to operationalize at the individual level the protective effect of cultural continuity that is observed at the community level. That is, by assessing the types of projects that

individuals use to achieve and maintain a sense of belonging to their community or cultural group, we can begin to understand how cultural continuity makes its way into people's everyday lives.

The main purpose in laying out in detail the structural properties of the PPA data and the interrelations among the self and traditional factors is to provide a backcloth against which to compare the personal project systems of Essentialists and Narrativists. The next section addresses these differences.

III. Differences between Essentialists and Narrativists

Essentialists and Narrativists did not differ with respect to age or gender. Although the distribution pattern of level of self-continuity reasoning is slightly different for the two groups, there was no overall mean difference in level of reasoning. Nor did Essentialists and Narrativists differ in their overall personal project ratings: both groups report similar levels of Meaning, Community, Structure, Stress, and Efficacy associated with their overall project systems as a whole. Nor yet do the groups differ in the degree to which they judge their projects to be relevant to the achievement of the various self-functions. For Essentialists and Narrativists alike, personal projects are, just as Little intended, used to manage the minutiae of everyday life.

Differences do begin to appear, however, when one examines the kinds of projects that Essentialists and Narrativists engage in, and the ways in which project meaning and manageability (compare meaning-manageability tradeoff, Little, 1998) is achieved in the service of overarching needs for self expression, preservation, enhancement, and extension. More specifically, group differences are specifically

associated with certain kinds of projects. Narrativists, for example, engage in more Interpersonal projects than Essentialists do. Essentialists report that their Health projects are more relevant to Future-Other self functions. The Administrative projects are more stressful and more central for Narrativists. And the list goes on. The results of analyses carried out on project content categories, however, support a much shorter list of overall differences between Essentialists and Narrativists that are consistent with the self-continuity strategies of these groups. It appears that Narrativists have a more distributed sense of self (distributed across both people and projects), and that Essentialists are change-resistant and tend to engage in projects that are more manageable rather than meaningful.

The claim that Narrativists have a more distributed sense of self is evident in both the greater frequency with which they engage in Interpersonal projects (more distributed across people) and in the fact that they show higher ratings of Self identity for Administrative tasks. Higher levels of Self-identity associated with *Administrative* projects–with the 'nitty-gritty of our lives'–seems to indicate that Narrativists invest a substantial amount of 'self' even into seemingly mundane tasks such as searching for an apartment, filling out job applications, or cleaning the house. Narrativists deem their Administrative projects only slightly less stressful than their Academic ones, while Essentialists experience much lower Stress in conjunction with their Administrative projects than with Academic ones. The reason for this, as speculated earlier, may lie in the higher self-identity that Narrativists invest in their Administrative projects: For them, Administrative projects are more relevant to their sense of self than their Academic or

their Health projects. For Essentialists, on the other hand, these other project categories are more reflective of their true self than Administrative undertakings.

It seems somewhat paradoxical that Administrative projects, such as cleaning house, should be so close to self for Narrativists. A more systematic inspection of the types of projects most frequently named for this category in the current study may yield an explanation. Since data collection times were situated towards the end of a university term, Administrative projects often included undertakings associated with planning, that is, they were future-oriented rather than representing maintenance tasks per se. For example, finding a summer job, registering for courses, or figuring out where to live next term were mentioned frequently. In that, since Narrativists may define who they are to a larger extent by what they *do*, rather than what they *have* (see Cantor, 1990; Hooker, 2002; Little, 2001; McAdams, 1995; 1996b, for a discussion of Havings, Doings, and Beings as three different levels in personality research and theory), this may account for the differences in Self-identity levels associated with Administrative projects.

The claim that Essentialists are change-resistant is supported by the analysis of Intrapersonal projects. *Intrapersonal* projects are theoretically particularly interesting, since they reflect "an individual's own motivation, personal characteristics, and sense of identity" (Little, 1993, p. 173). In the context of this study, they were expected to be particularly revealing with regard to possible differences between Essentialists and Narrativists. Indeed, the discriminant function analyses using the combination of the 29 project rating dimensions averaged across Intrapersonal projects, shows that Essentialists and Narrativists can be reliably distinguished on the basis of their Intrapersonal project ratings alone. Essentialists' Intrapersonal projects were more visible, value-congruent,

self-explorative, and self-extending, but lower in Initiation than Narrativists'. But Intrapersonal projects tend to be stressful and onerous (Little, 1993; Salmela-Aro, 1992), and Essentialists seem to avoid such projects whenever possible. When they do engage in these projects, they are likely co-initiated by other people. It is interesting to note that although Essentialists report lower Initiation for Intrapersonal projects, they do not report fewer of these projects. Furthermore, Essentialists tend to use their Intrapersonal projects to a larger extent to achieve Future-Other self functions (Exploration and Extension). A similar tendency is observed for Health related projects–suggesting that when Essentialists experience personal change it is either a result of projects that were pressed upon them by others or incidentally through Health projects that are undertaken for reasons other than personal change.

While overall (across groups), Intrapersonal projects are particularly relevant for Future-Other, Present, and Future-Better self functions, and Health projects are rated highly relevant for Future-Better and Past self aspects, the relative comparisons by group indicate that Past Self functions, as expressed by Preservation, are more likely accomplished through Health projects for Essentialists and through Intrapersonal projects for Narrativists. This is also indicated on the factor level by a statistical trend on Past self, $F(1, 35) = 6.63, p < .015$, partial $\eta^2 = .16$. This does not mean, however, that Intrapersonal projects are not important for Essentialists. Recall from earlier, that they are more value-congruent for Essentialists than for Narrativists. Also, levels of Self-identity associated with Intrapersonal projects are about equal for both groups.

When comparing Health and Leisure projects, a statistical trend indicates additionally, that Essentialists rate their Health projects as more important compared to

their Leisure projects, while for Narrativists the difference is smaller and reversed $F(1, 40) = 6.38$, $p < .02$, partial $\eta^2 = .14$. Together with the finding from the ANOVA that Essentialists deem their Health projects more crucial to Future-Self functions, it seems that Health projects have a particularly important role in achieving self-continuity for Essentialists.

The claim that, with regard to Little's meaning-manageability tradeoff, Essentialists favour more manageable projects, while Narrativists emphasize meaning is supported not only by the fact that Essentialists report fewer Interpersonal projects (just over half of Essentialists–54.2%–report such projects, compared with 85.2% of Narrativists), but these projects appear to be more concrete and more 'doable'. This is reflected in the project stage ratings–Essentialists deem their Interpersonal projects as being closer to completion and, therefore, as possibly having more defined and concrete beginnings and endings rather than as representative of more extended and overarching personal strivings.

The meaning-manageability tradeoff (Little, 1989, 1998; McGregor & Little, 1998) as discussed with regard to the need "to jointly optimize the manageability and the meaningfulness of projects" (Little, 1989, p. 21) is essentially a question of project 'phrasing level'. Little (1988) suggests that the level at which a project is phrased can be determined "simply by reference to its abstraction level, its syntactical or linguistic complexity, and the scope and span of activities entailed" (p. 44). In Little's example, the meaning-manageability tradeoff consists in the need to choose between or balance molecular level projects such as "return the ladder to my neighbour" and highly molar level superordinate activities such as "challenge the rise of Australian realist philosophy"

(Little, 1989, p. 21). Essentialists not only rate their Interpersonal projects as further progressed than Narrativists rate theirs, they also rate them as more progressed compared to their own Academic and Leisure projects, while Narrativists rate projects in each of these categories to be at similar stages. This indicates that, if Essentialists in fact construe their Interpersonal projects at lower phrasing levels (Little, 1988, 1989; Emmons, 1992) than Narrativists–as hypothesized earlier–then this is a content specific phenomenon, which does not generalize to the categories of Academic and Leisure projects. If Project stage does, in fact, signify a proxy measure of project phrasing level, then Essentialists seem to tip the balance towards more manageable while Narrativists may tend to choose the meaningful.

Summary and Conclusions

Overall, then, no differences between Essentialists and Narrativists were found with regard to demographics, overall project ratings, personality characteristics, and subjective well-being. However, differences were found for most of the project content categories (i.e., Health, Interpersonal, Intrapersonal, and Administrative). Profile analyses allowed us to explore the differential project appraisals identified in earlier analyses in more detail. This summarizing discussion of differences between Essentialists and Narrativists focuses on the ways that Essentialists and Narrativists make use of Health, Inter-, and Intrapersonal projects, since these differences seem most pertinent to how self-continuity functions are achieved differentially.

Essentialists seem to use Health projects differently from Narrativists in a variety of ways. In the context of the comparisons to their ratings of other project content

categories, Health projects for Essentialists are relatively higher on Self-identity, Preservation, and Past self. Their Health projects have also been rated higher overall on Future-Other as compared to Narrativists'.

In being highly relevant to both their preservation needs (Preservation, Past self) and their need for change (Future-Other: Exploration, Extension, Experimentation), Health projects may just be a main vehicle of self-continuity for Essentialists–extending from the Past via the Present to the Future. In that, this may well represent the Embodiment idea that makes up the 'essence' in 'Essentialist'–defining their body as a core aspect of what they count as self over time, or what they use to achieve an enduring sense of self (i.e. self-continuity)–a body that needs to be taken care of, exercised, fed well, and given a hair cut now and then.

For Narrativists, Intrapersonal projects are the more likely candidates to fulfill such Self-preservation or self-continuity functions, as expressed in higher Preservation ratings (and as a trend in higher Past self factor ratings) of projects in this category as compared to Health projects. Note however that, although Intrapersonal projects are rated highest with regard to Future-Other self functions overall (across groups), it is Essentialists who tend to use them reliably more towards Self exploration, Extension, and Experimentation. As mentioned earlier, Essentialists may in fact have higher strivings towards self change, or else they may be more attuned to noticing how their personal projects bring about changes in themselves as a person. While we cannot differentiate between these two explanations empirically, the latter fits the conceptualization of Essentialists as change avoidant and hence change alert.

Intrapersonal projects are aimed at changing psychological rather than physical aspects of the self. As such, our findings suggest that Narrativists–in concordance with Chandler et al.'s (2003) conceptualization–are looking for stability or continuity not in essences, but in psychological constructs, and in the construction and re-construction of personal narratives as suggested by McAdams (1995, 1996), Sarbin (1997), and other life story theorists (e.g., Bruner, 2001, Ezzy, 1998). In summary, Intrapersonal projects are highly relevant to the two Future-related self functions and Present self for both groups, and for Past self foremost for Narrativists.

While Interpersonal and Health projects provide additional routes to achieve Past self functions, the absence of *Interpersonal* projects in a large portion of Essentialists underscores again the differential importance of Health projects for this group to meet these needs. Besides being important for Past self, Interpersonal projects are rated highest on Identity/Culture, followed by Leisure projects. Profile analyses did not reveal any differences with regard to the Identity/Culture factor. However, how do participants who do not list any Interpersonal projects (almost half of the Essentialists did not) meet these needs of agency and communion? One possibility is, that these Essentialists meet these needs through engagement in Leisure projects. As mentioned above, Leisure projects were rated second highest on Identity/Culture. Interestingly, a fairly large difference in proportions of Essentialists and Narrativists who haven't listed any project in this category was observed for Leisure projects (40.7% of Narrativists reported no Leisure projects compared with just 25% of Essentialists). Given the difficulty project category judges sometimes experienced with regard to whether a project was Interpersonal or Leisure, it is possible that Essentialists and Narrativists phrase these projects differently

although they fulfill similar self functions, and might even include very similar undertakings. For example, Essentialists may spin these projects in a way that they end up in the Leisure category (e.g., partying), while Narrativists may refer to the exact same undertaking in a way that would lead to a classification as Interpersonal (e.g., spend time with my friends).

IV. Relationships Between Personal Projects, Subjective Well-Being, and Personality

As before, I begin by discussing how the structure of the data derived for the overall sample compares to previous reports in the literature, and then move to a discussion of the differences observed between Essentialists and Narrativists.

Subjective well-being

According to Little's social-ecological model of well-being (2000a), the conceptual factors of Meaning, Structure, Community, and Efficacy relate positively to subjective well-being, while the factor Stress relates negatively. In the literature, as well as the current study, this claim is more strongly supported for the dimensions associated with Stress, Efficacy, and Structure, while less consistent relationships were found for dimensions representing Meaning and Community. While most of the dimensions assigned to Structure, Efficacy, and Stress relate to both, the cognitive (life satisfaction) and affective subjective well-being indicators, none of the Meaning and Community dimensions are related to life satisfaction.

McGregor and Little (1998) suggested that the lack of relationships observed between meaning dimensions and subjective well-being indicators is due to the fact that

traditionally used SWB measures (such as the ones used in the current study) pertain to the affective or happiness aspect of well-being only, while neglecting the meaning aspect of it. Based on an earlier study relating personal project ratings to SWB two weeks later I have proposed that meaning aspects of personal projects may become more important over time, while structural and organization related aspects may impact concurrent SWB to a higher degree. That is, a lack of meaningful projects may take its toll in the long run (Brandstätter & Baumann, 2003). In conclusion, the present findings are largely consistent with the personal project literature on subjective well-being (Little, 1989, 1998, 2000a; McGregor & Little, 1998).

With regard to our newly added *self-related dimensions*, the finding can be summed up in one sentence: Six out of the nine self-related dimensions relate to positive affect, while there are no relationships to any of the other SWB indicators. The relationships are distributed across all four self-factors. These results indicate that having at least some projects that serve self-functions, for example self-expression, exploration, enhancement and re-establishment may increase the experience of positive affect, without at the same time having any impact on negative affect or general life satisfaction.

Personality

In the following, I will first examine the similarities and differences of our findings with regard to previously reported relationships of PPA appraisal and personality characteristics. This discussion is grouped around the Big Five traits, and draws mostly on the findings reported by Little, Lecci, and Watkinson (1992). Then I will turn to an

examination of the possible reasons why relationships of the self-related dimensions and factors occur selectively–and consistently–with the Openness to Experience factor only.

Neuroticism. The pattern of association observed in our study is virtually identical to the one reported by Little et al. (1992), with the exception that for Progress and Enjoyment we only find a negative relationship indicated by a statistical trend, and Self-identity is not correlated in our sample, whereas in Little et al.'s it exhibits a small correlation (-.14). The moderate positive relationship between Others' view of importance and Neuroticism in the interpersonal domain suggests that neurotic individuals evaluate their interpersonal goals as more appreciated by others, although we cannot determine on the basis of these data whether that is a subjective perception of the individual, or reflects a true higher level of importance ascribed to the projects by other people.

Extraversion. For extraversion, the general conclusion is that there is less overlap with Little's findings. Little reported overall relationships of Extraversion with most Meaning dimensions (except Value congruency), Visibility, and strongest correlations (of a moderate size) with the Efficacy dimensions Progress and Outcome, while Extraversion was not related to Stress dimensions. When dimension scores are calculated across the full set of 8 projects, the present findings replicate the relationship of Extraversion to Visibility and Outcome, but not the relationships to the Meaning dimensions or to Progress.

Openness. Across all projects, we replicated four of Little et al.'s six correlations (i.e., the three meaning dimensions Enjoyment, Value congruency and Self-identity, as well as Initiation), however did not find Difficulty and Control to be reliably related to

Openness overall. Instead, we found additional relationships for Progress and Absorption, and a statistical trend relating Challenge to Openness as well.

Agreeableness. While Little et al. found positive correlations with the Efficacy dimensions and two Meaning dimensions (Importance and Value congruency), as well as negative correlations with the Stress dimensions Stress and Difficulty across all projects, we only replicated two of these relationships (Outcome and Value congruency, the latter as a trend only), and observed additional relationships for Initiation as well as statistical trends for Control and Self-identity.

Conscientiousness. As expected by Little et al., Conscientiousness was found to exhibit a broad range of relationships to positive project dimensions, specifically to Meaning, Community, and Efficacy. In our sample, we replicated two of the four relationships with Meaning dimensions (Self-identity, and Enjoymnent), and the relationships with Efficacy dimensions are found as statistical trends in the current study. In contrast, the Community dimensions were unrelated in the current study when the overall project ratings were used.

Self dimensions and Personality

The moderate relationship observed between all self dimensions as well as the orthogonal Future-Other and Future-Better self factors with *Openness* is interesting to interpret in view of the hypothesized relationship of Openness to Meaning dimensions by Little, Lecci, and Watkinson (1992). According to them, openness "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" (p. 508), and hence hypothesized

Openness to relate to meaning dimensions as well as those that reflect "a more exploratory approach to daily living (e.g., project initiation)" (p. 508). It makes intuitive sense that project dimensions describing how projects are used to try new ways of being (Future-Other), improve aspects of the self (Future-Better), as well as generally express a person's innermost self (Present), and reflect their attempts of holding on to valued personal characteristics (Past), also relate to this personality characteristic.

As well, since Intrapersonal projects have been related to Openness, and Intrapersonal projects in this study are the ones that proved to be rated most relevant to the various self-functions (by both Essentialists and Narrativists), these findings close a circle. A higher number of Intrapersonal projects has been linked to both Openness and Depression (Little, 1989; Little et al., 1992; Salmela-Aro, 1992; Zomer, 2000; Zomer, Chambers, & Little, 2001). Intrapersonal projects are the ones that are rated highest on the four self-functions included in this study, and Openness, in turn, is positively related to these self-functions.

Comparison of Essentialists and Narrativists

When examining relationships between PPA and SWB as well as personality measures for Essentialists and Narrativists separately, conceptually interesting differences emerge. For SWB, they center on the differential relationship of the factors Identity/Culture and Community with SWB for the two groups. For personality, differences are not less prevalent, but more widely distributed.

Subjective well-being. When comparing how personal project appraisal and subjective well-being are linked for Essentialists and for Narrativists, three conclusions

can be drawn. First, higher levels of Stress associated with a person's personal project system are predictive of lower SWB for both groups. Second, for Narrativists, the extent to which projects reflect a sense of personal identity as well as a sense of belonging to their community or culture, is highly reflected in their affective experience. Higher Identity/Culture is associated with high positive and low negative affect. For Essentialists, these relationships are completely absent. For this group, it is the more tangible aspects of community, such as Support and Others' View of Importance, that are more relevant to the experience of positive affect as well as affect balance. Although such a relationship between Community and positive affect is indicated by a trend for Narrativists as well, this is clearly less crucial to this group's personal well-being.

This finding is particularly interesting in view of Chandler and Lalonde's (1998) analysis of the inverse relationship between cultural continuity and suicide rates in British Columbia's Aboriginal communities. Their analyses showed that suicide rates are much lower in Aboriginal communities that succeed in preserving cultural practices and promoting self-government. The finding that the extent to which personal projects reflect both a personal sense of agency and a sense of belonging to one's community plays an important role in the well-being of individuals preferring a Narrative approach to self-continuity, while having little effect for Essentialists, combined with the finding that Aboriginal persons prefer Narrativist strategies by a margin of 4 to 1, fits nicely within their theory of cultural continuity (Chandler et al., 2003). It is (indirect) evidence of the differential importance that cultural connectedness has for different subgroups of people, which are represented in different proportions in different cultural groups, and may thus

make cultural continuity particularly important to communities preferring a Narrativist approach to self-continuity, such as Aboriginal communities.

The third and final conclusion to draw from the differential relationship between SWB and personal projects, is that for Essentialists, positive affect is particularly–and only–associated with Past self aspects, indicating that they experience positive affect mainly if personal projects are construed to provide self preservation and re-establishment, rather than any of the other self-functions. For Narrativists, relationships (although only indicated by trends) are spread out across Present, Past, as well as Future-Better self functions.

Personality. It is more difficult to summarize the differential relationships with personality characteristics for Essentialists as compared to Narrativists succinctly. A number of diverse significant correlations as well as relationships indicated by statistical trends are observed, and with the exception of the relationship between Future-Better and Past self aspects to Openness of Experience, they all differ. Again, one of the differences is rooted on the Identity/Culture and Community factors. For Essentialists, Identity/Culture is only inversely related to Extraversion, while for Narrativists we observe relationships for this project factor to Agreeableness, Openness (positively), as well as Neuroticism (negatively). In turn, Narrativists' personality characteristics do not appear to predict the levels of Community associated with their personal project systems. Essentialists, on the other hand, do report higher community if they are low on both Neuroticism, and Openness. Finally, while the projects of agreeable Essentialists seem to be higher on Future-Better than those of their less agreeable counterparts, this

relationship was found to be reversed for Narrativists. For them, high Agreeableness relates to lower Future-Better orientation of their projects.

V. Contributions and Limitations of Current Study, and Suggestions for Future Research

The goal of this study was to connect two very different theoretical traditions and methodological approaches that have previously been employed in the study of selfhood. On one hand, there are studies of self-continuity–of the ways in which young persons come to grapple with the same problems of personal persistence that have vexed generations of philosophers. These studies have revealed both developmental and cultural variation in the contrasting ways in which persons of different ages and different cultural backgrounds come to resolve the paradox of sameness and change. On the other hand, there is the study of personal projects–of the ways in which the seemingly mundane goals and plans of everyday life can reveal the structure of the self. Research in this tradition has uncovered a remarkable complexity in the ordinary magic of what McAdams has called 'selfing' (1996c).

The procedural means chosen for connecting these two traditions was exceedingly simple: apply both sets of measures to the same sample of participants. The reasons for doing so, or more precisely, the reasons to expect some coherent set of results to obtain, were guided by a theoretical commitment to the notion that self conceptions are neither entirely private, nor completely public. That is, who we are, the persons we take ourselves to be, the persons we hope to become or fondly recall having been, are neither fully determined by our cultural surround nor matters of personal invention. The current study was predicated on the notion that we construct and re-construct and invent and re-invent ourselves in ways that bear the marks of both social and personal construction.

The goal of the current study was to empirically demonstrate that this process of 'selfing' connects our deep-seated, enduring, and implicit conceptions of self with the more routine, changeable, and explicit actions we undertake in our workaday social worlds.

The specific questions that guided the analysis of the data were also rather simple: How are conceptions of the self reflected in our everyday actions? Can our routine lists of daily projects and personal strivings tell us anything about implicit conceptions of personhood? How do such projects function to maintain or modify our implicit understanding of ourselves? Finally, how are abstract conceptions of selfhood related to other aspects of self such as subjective well-being and personality structure?

The answers to these questions, as you have seen, are long-winded and numerically complex. That complexity is a largely unavoidable byproduct of the need to move back and forth across different levels of conceptual analysis. It was important to show, for example, that the data collected met the established expectations of both self-continuity and personal projects research. For that reason, large portions of the Results section are given over to matters unrelated to the intersection of self-continuity and personal projects. The reward for having met these background conditions—for being certain, for example, that Essentialists and Narrativists do not differ from one another on demographic variables or levels of subjective well-being, or that participants who completed the self-continuity interviews were no different in their personal projects ratings than their non-interviewed peers (compare Appendix F)—comes in the ability to move between levels of analysis with a greater degree of confidence. In the end, what all these dense statistical procedures collectively allow us to conclude is that reasoning about

self-continuity really is connected to personal projects in ways that should inform theorists in both camps.

We learn that Narrativists and Essentialists each use personal projects in ways that are consistent with their conceptions of personal change. Narrativists emphasize the relational and interpersonal aspects of change while Essentialists, though less likely to actively seek change, maintain continuity by structuring their project systems somewhat differently. Conversely, we learn that personal projects can, and evidently do, serve a well supported set of self functions that operate to connect Essentialists and Narrativists alike to past, present, and future aspects of selfhood. Finally, we learn that while Essentialists and Narrativists are not distinguished by differences in subjective well-being or in the basic structure of their personalities, these measures are related to the differing structures of their personal project systems.

The value of these findings must be judged in relation to certain limitations inherent in the current design. The participants–first year psychology students–are hardly representative of young adults in general, or even university students more specifically. Fully three-quarters of the participants were women, and 97% of participants fell between the ages of 17 and 24 years. While the demographics of the participants are fairly consistent with the overall make up of the classes from which they were drawn, they are, admittedly, a rather restricted set of young people. The use of a cross-sectional correlational design similarly limits the strength of the findings.

From a design perspective, overcoming these limitations would be relatively simple. To expand the scope of the study in future research, it would seem important to supplement the current roster of questionnaire measures with more qualitative

assessments of the relations between meaning and manageability and the self functions. In particular, what we want to know is how certain projects, or certain kinds of projects are understood by their creators to fulfill needs for agency and communion or to integrate the past, present, and future. The current study suggests that such relations exist, while a qualitative methodology could further explore the participant's understanding of these relations.

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Appendix A

Descriptions of Tracks and Levels of Alternative Self-Continuity Warrants

(adapted from Chandler, Lalonde, Sokol, & Hallett, 2003)

including Examples taken from Transcripts of Current Sample

Essentialist Accounts

Generally, essentialist strategies aim to "vouchsafe personal persistence by identifying some aspect of self or other that stands apart from time" (Chandler, et al., 2003, p. 29), while each level differs in terms of how abstract or substantive this entity or essence is.

Level 1: Simple inclusion arguments represent an add on picture of personhood, where pointing to one thing, typically a concrete, physicalistic feature (e.g., name, DNA) of the self that at least for the moment remains the same is sufficient to guarantee one's diachronic singularity. These accounts fail to seriously engage the permanence-change dialectic, and apply a divide-and-conquer strategy instead.

Example: "I think that it's still my, my morals and my beliefs about myself haven't changed really, like I still, I still believe that whatever I wanna do I will do, I am a hard worker, I still, like I still have those same values to me, that are important to me, those haven't changed. They might be just reinforced, or they might be, like narrowed down from what they were five years ago, but they are still there."

Level 2: Topological accounts minimally engage the dialectic at hand, but quickly dismiss change as being merely apparent or presentational, while real foundational change is impossible. Thus, instead of the add on collection of parts they conceive of the self as having a somewhat better organized architecture, where different vantage points yield different views. However, every apparently novel aspect was already present from the beginning, even though temporarily obscured.

Example: "I don't think I've changed so much, I've just grown up, like matured and taking on those responsibilities that naturally come with growing up, but I don't think I've changed so drastically as the characters to a totally different person and changed my life other than moving and stuff. I used to help out at the hospital and stuff and do community stuff and now I coach the little kids for free, volunteering, so I don't know, I'm always trying to get involved still."

Level 3: Preformist accounts differ from level 2 topological accounts, in that they allow for the idea "that some of one's enduring parts are, at times, merely nascent and waiting in the wings" (p. 33). This maturational or epigenetic model is more temporally organized than its precursors, but still endorses the view that the self possesses enduring attributes which are at least always immanent, and will naturally ascend in accordance with some imagined pre-arranged ground plan. It is still considered impossible that more complex structures could come out of less complex ones, or in other words, that there is anything really new under the sun (Chandler et al., 2003).

Example: "Because I am still, I have changed a lot, but my basic outlook on life is the same, and I've, I feel like I have just given the person, the person that I was five years

ago, is still in me, there is still, I am still a big dreamer and I am still a really outgoing person, and I still love to laugh and I am light-hearted about things, I've just learned how to put the things in other ways, that might be beneficial to me at some times too, how to take things seriously, how to get like, how to see realistically where I am going in life, that kind of thing. So I feel like I haven't, I have changed, but in a way that just adds to who I was, so. [...] I just have, have grown into who I am, because of who I was five years ago."

Level 4: Frankly essentialist accounts make use of something that could be called a genotype-phenotype distinction, thus being able to recognize change on the surface-structure, while still containing that the real essential heart of the matter, their core self is unchanging. Thus, the self is regarded as a hierarchically organized structure, where deeper lying layers are taken to be more central to the true essence (e.g., personality, or soul), which is "capable of productively paraphrasing itself in endless surface variations" (p. 34).

Example: "I think some of the, the differences in attitude or differences in behavior that I might display, are very different from how I used to be, but if you were to look at the specific circumstance where I learned that behavior, or where I sort of assumed that attitude, it would be like definitely in relation to what I have learned from the past – so like I said you know you might learn from the consequence, so the action is going to be different from your former action, but it's related to what, like whatever you have learned from the situation, and just like in the stories, I mean different situations are going to like bring out different characteristics."

Level 5: Revisionist accounts begin to cross over and are hard to distinguish from Narrative like conceptions, as people who invoke these accounts bracket their current beliefs about themselves as provisional and theory-like, something that is just another version of what will be different again at a later point. The knowledge about oneself is a working hypothesis, rather than a brute fact, and the truth is forever beyond knowing.

Example: "I think that I always had the characteristics before that I have now, but through being in different environments, or being faced with different challenges, those characteristics may have been lost for a little while, or perhaps weren't expressed because other emotions or other characteristics arose out of being in situations that made me insecure. [...] Well I want to say because the things that I feel now about myself I feel that I had before but I just couldn't express them, and so now the things that I feel, the things that I do aren't new to me, but they're just more reinforced now."

Narrativist Accounts

Narrative accounts all share that they embrace change, rather than dismiss it, and attempt to serialize it in one way or another into a system of followable meanings. They differ, however, in their conception of the structure or architecture of the self, and in their assumptions about the nature of the connections between the various episodes making up the life story (Chandler et al., 2003).

Level 1: Episodic accounts (as all narrative ones) take time seriously, but simply provide an add-on, chronological listing of events, strung together one after the other to make up a life, however "a life without noticeable rhyme or reason" (p. 38).

Example: "I think, the changes have just been, like, things I have, if they are to be called changes, just things that I've learned, are better, so to say, or learned better, that I think are better ways of doing things, or ways of approaching things, or ways of thinking about other people which I think have better, better outcome too, than perhaps what I thought before, so I haven't changed, I have just learned, or have been learning."

Level 2: Picaresque accounts surpass their predecessor as they represent real stories which offer "the germ of a plot, [even if] it is not much of a plot, and certainly doesn't contain much in the way of coherent character change" (p. 39). However, they tend to offer what Rorty (1976, as cited in Chandler et al., in press) calls *characters* or *figures* rather than *persons* or *selves* or *individuals*.

Example: "Really just kind of the same reason as in the stories I guess, I still remember like some of the things I did and what I was like in the past and sort of really realize that some of the things I did were wrong and it just helps, it's a reminder of sort of ways you need to act, so like really remembering just, maybe actions or beliefs in the past, it's really important, like that really makes you still the same person, because you know from experience what you've done, and what you need to change. [...]You still recognize sort of like the things you were doing wrong in the past to help you, to help you make right decisions and stuff in the present."

Level 3: Foundational accounts actually depict the discovery of some sort of directionality in the plot, however, conceive of the present self as an inevitable effect of one's past or a natural outgrowth of a predictable process of maturation. Resulting is a

maturational/cause-and-effect sequence, in which present lives are understood to be fully determinate, a rather fatalistic view.

Example: "I guess one of the main reasons that I think I'm still the same person is continuity. I have memories of who I was, I have memories of my life all the way through till now. Those memories helped shape, I guess who I am now, or helped shape my personality. [...] I think it's just a question of experience and maturity. I think, I mean five years ago I was 15, so that's pretty young, it's pretty hormonal, so I think maybe part of the changes are just cause my body's settled down and figured itself out, and part of the changes are because I've moved to a different place, and I've met different people who are really interesting, really different from the people who I knew before."

Level 4: Frankly narrativist accounts share the *leading-to* dimension with their level 3 predecessor, however, are much more liberalized with regard to determinate relations. Thus, individuals on this level much more resemble "'embodied agents', who shared responsibility for the way that things went in their lives" (p. 41), rather than viewing themselves "as pawns of circumstance" (p. 41). They also often see the path of self-discovery marked by multiple missteps that need corrections.

Example: "Well I think just because of changes in my life I've, it's just amazing to think how incredi-, how much I've changed. I think by just new changes and new experiences and new people and I mean in the sense the Bear Woman, I mean I've been isolated from one place, but I've been shown this whole other place, this whole other world, this new society and is, I mean in the sense of Valjean I mean I've just been, as

opposed to being kind of less knowing of people, more ignorant, I've become more aware of people's needs and wants and I've tried to cater towards that."

Level 5: Interpretive accounts testify to the ability to see one's "own and others' active roles in interpretively constructing whatever order was ascribed to the temporarily sequenced events of life" (p. 42). Thus, one of the main accomplishments on this level is to realize that the plot is something imagined to best characterize the unfolding events of life, knowing that it merely represents their current best approximation of an imagined pattern, and regarding "their own efforts at meaning making as only the latest in a perhaps endless series of attempts to interpretively re-read the past in light of the present" (Polkinghorne, 1988, as cited in Chandler et al., 2003, p. 42).

Example: "It's been interesting evaluating myself. And so, to do that, you have to know that you are the same person, but evaluating, and this is the process I have been through in these last few years, evaluating where I have been, and how I have made decisions or not made decisions, and then reaching that point in saying, but now I can, I can take control of this, to a degree, of course, I mean that's, and I can now make a plan, whereas to this point, I haven't, but I am going to. Those are all aspects of how I know who I am. [...] Well, and I guess I am just gonna say again, it's because it's been conscious decisions that I have made evaluating the past, evaluating the present, and anticipating what may be in the future. And seeing the connection of all of that, would be the all-encompassing ball of whack."

Appendix B

PERSONAL PROJECTS QUESTIONNAIRE

We are interested in studying the kinds of activities and concerns that people have at different stages of their life. We call these *personal* projects. All of us have a number of personal projects at any given time that we think about, plan for, carry out, and sometimes (though not always) complete.

Here are some examples of projects:

- Completing my English essay
- Trying to help Gary get along better with others
- Overcoming fear of meeting new people
- Getting more outdoor exercise
- Trying to finish the book Allan gave me
- Taking a trip to Ottawa
- Cutting the grass
- Finding a part-time job
- Redecorating my bedroom
- Trying to clarify my religious beliefs
- Losing ten pounds
- Making a birthday present for my friend

We are also very interested in finding out how people feel about these personal projects, how enjoyable they are, and so on. We would appreciate it if you could begin by just writing down in the next ten minutes as many personal projects as you can that you are engaged in or thinking about at the present time—remember these are not necessarily formal projects, or important ones—we would prefer you to give us more of the everyday kinds of activity or concerns that characterize your life at present.

List of Projects

Please write down as many as you can in ten minutes.

_____

_____

_____

_____

_____

_____

_____

On the pages that follow, you will be rating 8 of your projects. If your initial list contains *more* than 8, select the 8 that you feel would provide the greatest insight into aspects of your life at present. If you wrote down *fewer* than 8, see if you can think of several more, or break down some of those you listed into several projects. It is important for everyone to try to fill in 8 projects.

Please give each of the 8 projects you want to rate a short title and write the titles in the spaces below. Make your description long enough to keep each project clearly in mind.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____

You will be asked to rate each of the 8 projects you listed on 31 dimensions. Ratings can range from 0 to 10. Be sure to complete all 31 items for each project.

Project #1: _____

1. **Importance:** how important this personal project is to you at the present time
   not important at all ... very important
   0 1 2 3 4 5 6 7 8 9 10
2. **Enjoyment:** how much you enjoy working on this personal project
   don't enjoy it at all ... enjoy it very much
   0 1 2 3 4 5 6 7 8 9 10
3. **Difficulty:** how difficult you find it to carry out this personal project
   not difficult at all ... very difficult
   0 1 2 3 4 5 6 7 8 9 10
4. **Visibility:** how visible this personal project is to the relevant people who are close to you, that is how aware are they that you are engaged in this project
   not visible at all ... very visible
   0 1 2 3 4 5 6 7 8 9 10
5. **Control:** how much you feel you are in control of this personal project
   not in control at all ... totally in control
   0 1 2 3 4 5 6 7 8 9 10
6. **Initiation:** how much you feel responsible for having initiated this project
   no part in initiation ... totally initiated by yourself
   0 1 2 3 4 5 6 7 8 9 10
7. **Stress:** how stressful it is for you to carry out this personal project
   not stressful at all ... very stressful
   0 1 2 3 4 5 6 7 8 9 10
8. **Outcome:** what you anticipate the outcome of this personal project to be
   not successful at all ... very successful
   0 1 2 3 4 5 6 7 8 9 10
9. **Self-identity:** to what extent this personal project is distinctly you; your personal "trademark" as opposed to quite alien to you
   not typical at all ... very typical
   0 1 2 3 4 5 6 7 8 9 10
10. **Others' view of importance:** how important this personal project is seen to be by relevant people who are close to you
    not important at all ... very important
    0 1 2 3 4 5 6 7 8 9 10

Project #1:

11. Value-congruency: to what extent is this personal project consistent with the values which guide your life

not congruent at all — very congruent

0 1 2 3 4 5 6 7 8 9 10

12. Negative impact: how much you feel that this project hinders other projects

no negative influence at all — very large negative influence

0 1 2 3 4 5 6 7 8 9 10

13. Progress: how successful you have been in this personal project so far

not successful at all — very successful

0 1 2 3 4 5 6 7 8 9 10

14. Challenge: to what extent this personal project is demanding and challenging to you

not challenging at all — very challenging

0 1 2 3 4 5 6 7 8 9 10

15. Absorption: to what extent you become engrossed or deeply involved in this personal project

not absorbed at all — very absorbed

0 1 2 3 4 5 6 7 8 9 10

16. Support: to what extent you feel supported in this personal project

not supported at all — very supported

0 1 2 3 4 5 6 7 8 9 10

17. Distractibility: how easily somebody could distract you from pursuing this personal project

not easily at all — very easily

0 1 2 3 4 5 6 7 8 9 10

18. Commitment: how committed you are to carry out this personal project

not committed at all — very committed

0 1 2 3 4 5 6 7 8 9 10

19. Community/Culture: how much this personal project conveys or reflects a sense of connection to your community or culture

no sense of connection — very strong connection

0 1 2 3 4 5 6 7 8 9 10

Project #1:

20. 'With whom': please write down the names of the other people involved in this project with you. You may use only first names, but include the initial of the last name to differentiate people who share the same first name. If there is no one else involved in this project with you, leave the space below blank.

21. 'Where': please indicate the setting in which you would most likely or most typically carry out this project. Some projects may not be taking place in any particular setting, in which case you would leave the space below blank.

22. Stage: Projects often go through several stages, which can be visualized along a time-line, such as:

0.....1.....2.....3.....4.....5.....6.....7.....8.....9.....10

Think of this personal project as moving through stages on such a time-line. Using the scale on this page, rate this project's stage:

0 to 1:	Awareness	The idea for the project has just come to you.
2:	Transition	You have the idea for the project and some thoughts on how to approach it. You are deciding whether the project can actually be carried out.
3 to 4:	Planning	You have decided to proceed with the project. You are planning it and obtaining whatever personal and material support it may require.
5:	Transition	You have the project planned out and you are beginning to (or trying to) actively start the project.
6 to 7:	Action	You are actively working on the project and trying to balance it with your other projects, resources and time commitments.
8:	Transition	You are evaluating the project and your motivation to continue with it, or bring it to completion/disengage from it.
9 to 10:	Completion	The project is coming to a close or has actually been completed or terminated.

Project #1: _____

23. Centrality: how central this personal project is to your sense of self
not at all central to self very central to self
0 1 2 3 4 5 6 7 8 9 10

24. Expression: to what extent this personal project highlights or showcases an aspect of the self that already exists – a part of you that has not reached the surface but already exists
not self-expressive at all very self-expressive
0 1 2 3 4 5 6 7 8 9 10

25. Enhancement: to what extent this personal project aims at improving upon an existing positive aspect of the self.
not self-enhancing at all very self-enhancing
0 1 2 3 4 5 6 7 8 9 10

26. Experimentation: to what extent this personal project reflects trying new ways of being
not self-experimental at all very self-experimental
0 1 2 3 4 5 6 7 8 9 10

27. Exploration: to what extent this project examines aspects of the self
not self-explorative at all very self-explorative
0 1 2 3 4 5 6 7 8 9 10

28. Extension: to what extent this project reflects an existing part of the self that is pushed or applied to new settings or displayed in a new manner
not self-extending at all very self-extending
0 1 2 3 4 5 6 7 8 9 10

29. Preservation: to what extent this project prevents changes to existing aspects of the self by taking actions that strengthen the current self
not self-preserving at all very self-preserving
0 1 2 3 4 5 6 7 8 9 10

30. Improvement: to what extent this personal project serves the improvement of an existing (negative) aspect of the self
not self-improving at all very self-improving
0 1 2 3 4 5 6 7 8 9 10

31. Re-establishment: to what extent this personal project serves to reconnect to or regain an earlier aspect of the self
not self-re-establishing at all very self-re-establishing
0 1 2 3 4 5 6 7 8 9 10

[Pages 4 through 7 are repeated for each project]

Appendix C

Descriptions of Personal Project Content Categories

(adapted from Little and colleagues, 1994)

(1) Academic/Occupational. This category includes job-related courses (e.g. learn to type, learn French) or tasks on the job (e.g. finish report) and school-related projects (e.g. assignments, essay, exams, readings). Subcategories are Academic projects, Job-related projects, and Professional organizations. Organizational activities, for example registering for courses or finding work are categorized as Administrative/Maintenance projects. *Examples from this study include:* Pass all courses; finish bio project; study for finals; attending classes; writing thesis; memorize Latin verbs; 6.0 gpa; math homework; raise marks in school.

(2) Health/Body. This category includes activities relating to appearance, health, or fitness (e.g. lose or gain weight, work out, jog, sleep, play a sport with a fitness goal clearly stated and not for recreational purposes). The subcategories are Appearance and Health. *Examples from current study:* Eat more healthy food; begin to work out, get in shape; quitting smoking; hair-cut, change hairstyle; go to the gym regularly; yoga; get a good sleep; going tanning.

(3) Interpersonal. This category includes projects dealing with others on a personal level. The subcategories suggested are Family, Interpersonal intimate, Interpersonal secondary, Community/supportive projects, and Meta-projects. In this study, we have categorized meta-projects aiming at becoming more outgoing or meeting more people as intrapersonal projects since they focus on changing aspects of the self.

Examples: Spend more time with family; improve communication with family; talk to Kim, try understanding her; keep up contact with Jen; find time to have fun with friends.

(4) Intrapersonal. This category includes projects dealing with outlook and attitudes relating to the self. The subcategories are Spiritual or philosophical projects, Self-improvement projects, Meta-projects, Coping/adjustment (transition) projects, Self-regulatory projects, and Self-exploratory projects. *Examples included:* Clarify future job aspirations; start going to church again; learn to see an issue in different perspectives; stop procrastinating; do more social activities; staying happy.

(5) Leisure. This category includes recreational activities that are done alone or with others. The subcategories are Entertainment, Parties/Dances, Hobbies, Consumer, Drinking/Drugs, Pleasure projects, Vacation projects, Recreational activities, Sports, Enjoying your pet, and Estate. *Examples are:* Start reading Harry Potter, spend more time outside; learn to scuba dive; creating scrapbooks and photoalbums; planning trip to Mexico; finish my painting.

(6) Administrative/Maintenance. This category includes projects relating to organization and administration. The subcategories include Activities related to finding a place to live, selling or subletting; obtaining employment, Household/general projects, Car maintenance, Paying bills, arranging finances, loans, letters, Activities related to getting registered for a course or program, Tasks involving pets, and Meta-projects. *Examples are:* Pack to move out of apartment; apply to UCSB; finding a house for next year; looking for a part-time job; cut lawn; cleaning the house; register for courses.

(7) Other. This category includes projects that cannot be classified because of inadequate information.

Appendix D

Comparison of Cohort One and Two data

Because the total sample consists of data collected at two different points in time it is important to ensure that no systematic differences exist between the cohorts. The analyses reported in this appendix were conducted to test for demographic differences between the samples and to examine personal project data for variability that may be due to time of data collection.

Data from 205 participants were collected in April 2002 (Cohort One), and data from 184 participants were collected in November and December of 2003 (Cohort Two). For Cohort One, the questionnaire included the Personal Projects Analysis only, while for Cohort Two, 69 additional items pertaining to subjective well-being and personality characteristics were also included at the end of the questionnaire. Table D1 displays the overall number of participants and the number of interview participants by data collection cohort, gender, and questionnaire format.

Table D1
Number of total and interview participants by data collection cohort, gender, and questionnaire format

	Cohort One			Cohort Two			Total		
	Gender		Total	Gender		Total	Gender		Total
Format	Female	Male		Female	Male		Female	Male	
				Total Sample					
Paper	73	31	104	31	13	44	104	44	148
Web	76	25	101	109	31	140	185	56	241
Total	149	56	205	140	44	184	289	100	389
				Interview Sub-sample					
Paper	9	4	13	16	5	21	25	9	34
Web	3	5	8	25	8	33	28	13	41
Total	12	9	21	41	13	54	53	22	75

Demographics. Cohort One and Two participants did not differ with regard to age, $M = 19.48$, $SD = 1.91$, and $M = 19.65$, $SD = 3.90$, respectively, $t(259.66) = -.53$, *ns*, or gender distribution, χ^2 $(1, N = 389) = .59$, *ns*. However, a higher proportion of Cohort Two participants chose to complete the web-based questionnaire as compared to Cohort One, χ^2 $(1, N = 389) = 29.59$, $p < .001$. This difference might be attributable to the higher reliance on web-based teaching methods used in this course as compared to the earlier course. For example, the course from which Cohort One participants were drawn were part of the first cohort of Psychology 100 students at this University who were required to submit assignments via the Internet, thus every student was obligated to achieve a basic familiarity with web-based applications. In a similar vein, the higher tendency of students to use the web-based questionnaire may reflect a more general increase in familiarity and facility with the use of the Internet.

Personal project data. A 2 x 2 between-subjects multivariate analysis of variance (MANOVA) was performed on all 29 personal project dimensions as dependent variables. Independent variables were data collection cohort (Cohort One, Cohort Two), and questionnaire format (paper, web). Format was included as independent variable in this analysis to prevent any confounding effects, since responses consistently differed with version and the two samples include different proportions of web and paper questionnaires.

The total *N* of 389 was reduced to 382 through exclusion of seven participants with missing scores for Project Stage. The number of participants in each cell is presented in Table D2.

Table D2
Number of subjects in MANOVA

Data Collection Cohort	Format		Total
	Paper	Web	
Cohort One	101	101	202
Cohort Two	40	140	180
Total	141	241	382

Means and standard deviations, as well as F statistics for each dimension are displayed in Table D3. Using Wilk's criterion, the combined DVs were significantly affected by both format, $F(29, 350) = 2.57$, $p < .001$, partial $\eta^2 = .22$, and data collection cohort, $F(29, 350) = 2.49$, $p < .001$, partial $\eta^2 = .17$, but not by their interaction, $F(29, 350) = 1.42$, $p = .08$, partial $\eta^2 = .11$.

Using Wilk's criterion for Type I error protection, interpretation of univariate results is warranted for each dimension for the main effects of questionnaire format and data collection cohort only. Differences in format will be discussed in Appendix L. With regard to data collection cohort, Cohort One participants exhibited higher project ratings for *Importance*, *Visibility*, *Progress*, *Support*, and *Preservation*, while those in Cohort Two exhibited higher scores on the dimensions *Difficulty* and *Distractibility* (compare Table D3).

The dimensions on which Cohort One participants score higher are of a positive (Importance, Progress, Support) or neutral (Visibility and Preservation) nature, while Difficulty and Distractibility, the dimensions on which Cohort Two participants scored higher are clearly negative project dimensions. In terms of effect size, the multivariate effect reflects a moderate association of the combined DVs and data collection cohort,

Table D3

Means, standard deviations of Randomization Study with F-statistics and partial η^2 of multivariate analysis of variance with factors format and data collection cohort

Dimension	Format				Total		F-Statistic (Partial η^2)		
Data	Paper		Web						
Collection Cohort	M	SD	M	SD	M	SD	F	C	F x C
Difficulty									
Cohort One	6.14	1.52	5.62	1.43	5.88	1.49			
Cohort Two	6.62	1.55	5.99	1.53	6.13	1.55	11.34**	6.01*	.11
Total	6.28	1.53	5.83	1.50	6.00	1.52	(.03)	(.02)	(.00)
Stress									
Cohort One	5.42	1.62	5.16	1.63	5.29	1.63			
Cohort Two	5.09	1.77	4.78	1.63	4.85	1.66	2.40	3.53^	.02
Total	5.33	1.66	4.94	1.64	5.08	1.65	(.01)	(.01)	(.00)
Challenge									
Cohort One	6.41	1.27	5.92	1.62	6.17	1.47			
Cohort Two	6.61	1.47	5.93	1.42	6.08	1.45	12.63***	.39	.37
Total	6.47	1.33	5.93	1.50	6.12	1.46	(.03)	(.00)	(.00)
Negative impact									
Cohort One	3.87	1.63	3.70	1.53	3.79	1.58			
Cohort Two	3.71	1.66	3.74	1.49	3.73	1.52	.17	.12	.33
Total	3.83	1.63	3.72	1.50	3.76	1.55	(.00)	(.00)	(.00)
Distractibility [b]									
Cohort One	4.96	1.60	5.10	1.11	5.03	1.37			
Cohort Two	5.35	1.51	5.59	1.51	5.54	1.51	1.32	7.17**	.11
Total	5.07	1.58	5.38	1.38	5.27	1.46	(.00)	(.02)	(.00)
Progress									
Cohort One	5.45	1.28	5.28	1.25	5.37	1.27			
Cohort Two	4.80	1.39	4.91	1.47	4.88	1.45	.04	10.96**	.79
Total	5.26	1.34	5.06	1.39	5.14	1.37	(.00)	(.03)	(.00)
Commitment									
Cohort One	7.49	1.15	7.43	1.12	7.46	1.13			
Cohort Two	7.16	1.24	7.32	1.14	7.29	1.16	.14	2.84^	.70
Total	7.40	1.18	7.37	1.13	7.38	1.15	(.00)	(.01)	(.00)
Project Stage									
Cohort One	5.40	.99	5.39	.93	5.40	.96			
Cohort Two	5.31	.90	5.24	.92	5.26	.92	.14	1.24	.09
Total	5.37	.96	5.30	.93	5.33	.94	(.00)	(.00)	(.00)
Absorption									
Cohort One	6.00	1.19	5.26	1.29	5.63	1.30			
Cohort Two	5.61	1.43	5.29	1.52	5.36	1.50	11.52**	1.36	1.70
Total	5.89	1.27	5.28	1.43	5.50	1.40	(.03)	(.00)	(.00)
Importance									
Cohort One	7.86	1.10	7.66	1.16	7.76	1.13			
Cohort Two	7.47	.88	7.52	1.18	7.51	1.12	.35	4.28*	.91
Total	7.75	1.06	7.58	1.17	7.64	1.13	(.00)	(.01)	(.00)

Table D3 (cont'd)

Dimension	Format				Total		F-Statistic (Partial η^2)		
Data	Paper		Web						
Collection Cohort	M	SD	M	SD	M	SD	F	C	F x C
Self-identity									
Cohort One	6.26	1.40	6.08	1.38	6.17	1.39			
Cohort Two	6.16	1.28	5.93	1.50	5.98	1.46	1.61	.61	.02
Total	6.23	1.36	5.99	1.45	6.08	1.42	(.00)	(.00)	(.00)
Value-congruency [a]									
Cohort One	7.13	1.09	6.79	1.36	6.96	1.24			
Cohort Two	7.13	1.41	6.61	1.61	6.73	1.58	7.20**	.31	.32
Total	7.13	1.19	6.69	1.51	6.85	1.42	(.02)	(.00)	(.00)
Community/ Culture									
Cohort One	4.94	1.87	4.63	2.13	4.79	2.01			
Cohort Two	5.28	1.99	4.48	1.98	4.66	2.01	5.96*	.18	1.23
Total	5.04	1.90	4.54	2.04	4.73	2.00	(.02)	(.00)	(.00)
Enjoyment									
Cohort One	6.02	1.46	5.51	1.55	5.77	1.52			
Cohort Two	5.79	1.64	5.63	1.42	5.67	1.47	3.79^	.11	1.04
Total	5.95	1.51	5.58	1.48	5.72	1.50	(.01)	(.00)	(.00)
Support									
Cohort One	6.34	1.55	6.04	1.68	6.19	1.62			
Cohort Two	5.45	1.65	5.57	1.80	5.54	1.76	.22	12.34***	1.19
Total	6.08	1.62	5.76	1.76	5.88	1.72	(.00)	(.03)	(.00)
Others' view of importance									
Cohort One	6.56	1.35	6.19	1.62	6.37	1.50			
Cohort Two	6.05	1.64	6.20	1.42	6.17	1.47	.44	2.12	2.37
Total	6.42	1.45	6.20	1.50	6.28	1.49	(.00)	(.01)	(.01)
Visibility									
Cohort One	6.68	1.36	6.04	1.49	6.36	1.46			
Cohort Two	5.70	1.49	5.75	1.53	5.74	1.51	3.17^	14.33***	4.17*
Total	6.40	1.46	5.87	1.51	6.06	1.51	(.01)	(.04)	(.01)
Control [b]									
Cohort One	7.54	1.16	7.14	1.21	7.34	1.20			
Cohort Two	7.10	1.21	7.16	1.53	7.15	1.46	1.26	1.94	2.43
Total	7.42	1.19	7.15	1.40	7.25	1.33	(.00)	(.01)	(.01)
Initiation									
Cohort One	7.91	1.03	7.65	1.19	7.78	1.11			
Cohort Two	7.93	1.21	7.58	1.38	7.66	1.35	4.64*	.05	.10
Total	7.92	1.08	7.61	1.30	7.72	1.23	(.01)	(.00)	(.00)
Outcome									
Cohort One	7.57	1.00	7.44	1.11	7.51	1.06			
Cohort Two	7.69	1.05	7.34	1.16	7.42	1.14	3.75^	.01	.77
Total	7.61	1.01	7.38	1.14	7.47	1.10	(.01)	(.00)	(.00)

Table D3 (cont'd)

Dimension	Format				Total		F-Statistic (Partial η^2)		
Data	Paper		Web						
Collection Cohort	M	SD	M	SD	M	SD	F	C	F x C
Experimentation									
Cohort One	5.37	1.57	4.80	1.89	5.09	1.75			
Cohort Two	5.55	1.81	5.05	1.71	5.16	1.74	7.48**	1.18	.03
Total	5.42	1.63	4.94	1.79	5.12	1.75	(.02)	(.00)	(.00)
Exploration									
Cohort One	5.63	1.56	5.16	1.81	5.39	1.70			
Cohort Two	5.52	1.88	5.08	1.80	5.18	1.82	5.21*	.23	(.01)
Total	5.60	1.65	5.11	1.80	5.29	1.76	(.01)	(.00)	(.00)
Extension									
Cohort One	5.98	1.52	5.39	1.80	5.69	1.69			
Cohort Two	5.93	1.70	5.30	1.61	5.44	1.65	10.64**	.16	(.01)
Total	5.97	1.57	5.34	1.69	5.57	1.67	(.03)	(.00)	(.00)
Centrality [a]									
Cohort One	6.23	1.24	5.64	1.67	5.93	1.50			
Cohort Two	6.16	1.53	5.50	1.62	5.65	1.62	12.90***	.36	.04
Total	6.21	1.33	5.56	1.64	5.80	1.56	(.03)	(.00)	(.00)
Expression [a]									
Cohort One	5.93	1.26	5.37	1.69	5.65	1.51			
Cohort Two	5.73	1.46	5.35	1.55	5.44	1.54	7.46**	.40	.26
Total	5.87	1.31	5.36	1.61	5.55	1.53	(.02)	(.00)	(.00)
Improvement									
Cohort One	6.39	1.65	6.11	1.87	6.25	1.77			
Cohort Two	6.73	1.58	6.05	1.76	6.20	1.74	5.85*	.45	1.03
Total	6.49	1.63	6.07	1.81	6.23	1.75	(.02)	(.00)	(.00)
Enhancement [b]									
Cohort One	6.78	1.25	6.32	1.82	6.55	1.58			
Cohort Two	6.87	1.57	6.54	1.52	6.61	1.53	4.94*	.76	.13
Total	6.80	1.35	6.45	1.65	6.58	1.55	(.01)	(.00)	(.00)
Preservation									
Cohort One	5.38	1.45	5.13	1.72	5.26	1.59			
Cohort Two	4.67	1.58	5.02	1.69	4.95	1.67	.08	4.95*	2.70
Total	5.18	1.52	5.07	1.70	5.11	1.63	(.00)	(.01)	(.01)
Re-establishment									
Cohort One	5.45	1.79	4.90	1.86	5.18	1.84			
Cohort Two	5.56	1.64	5.02	1.83	5.14	1.80	6.98**	.31	.00
Total	5.48	1.74	4.97	1.84	5.16	1.82	(.02)	(.00)	(.00)

Note. F = Format, C = Data collection cohort. Multivariate F for Format (29, 350) = 2.57, $p < .001$, partial $\eta^2 = .22$. Multivariate F for Data collection cohort (29, 350) = 2.49, $p < .001$, partial $\eta^2 = .17$. Multivariate F for Format x Data collection cohort (29, 350) = 1.42, $p = .08$, partial $\eta^2 = .11$.

[a]Homogeneity of variance differs ($p < .05$). [b]Homogeneity of variance differs ($p < .01$).

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

partial $\eta^2 = .17$. The univariate effects for the significant dimensions for data collection cohort are small and range from partial $\eta^2 = .01$ to .04.

Thus, small differences were observed between participants from Cohort One and Two on the personal project ratings of seven of the 29 dimensions. We can only speculate as to the reasons for these differences. Although a higher proportion of Cohort Two participants completed the web questionnaire compared to Cohort One, these differences were accounted for by inclusion of format as independent variable in the above analysis. The observed differences may thus be a cohort effect, or be due to the fact that data collection for Cohort Two started about two weeks earlier during the term. Why there seems to be a somewhat systematic pattern of higher positive ratings in Cohort One as compared to higher negative ratings in Cohort Two is unclear. Since the participants in the two cohorts did not differ demographically and differences in ratings are small and not of theoretical importance, the two samples were collapsed and analyzed as a single sample.

Appendix E

Randomization Study

Rationale

Initial analyses of Cohort One data revealed unexpected yet systematic differences between the two formats of the questionnaire (i.e. web questionnaire vs. traditional paper questionnaire). At an alpha level of .05, 13 out of the 29 dimensions showed reliably higher values for the participants completing the paper questionnaire (see Table L1, Appendix L). To investigate whether this was a methodological artifact caused by the difference between the web and paper format, or a difference inherent to the participants who elected one format over the other, we designed a separate study in which participants were randomly assigned to either the web or the paper questionnaire. In addition, to examine any differences that might arise from the fact that some participants were asked to complete additional items pertaining to subjective well-being and personality characteristics, half of the participants in the web and paper group were assigned questionnaires with these additional items and half without.

This design will enable us to determine whether observed differences between respondents to the paper and web format on our PPA measure are in fact a methodological artifact (e.g., differential usage of positions on the rating scale), or whether the observed differences reflect true differences between participants choosing one version over the other. If we replicate the findings from our Cohort One data – respondents choosing the paper version having higher ratings on some of the dimensions as compared to the web respondents – then the differences can be confidently attributed to methodological differences between the paper and web version, since random

assignment will ensure that no systematic differences between our groups exist. If we don't replicate these differences, we can conclude that if given the choice, participants who choose the paper version differ systematically from those choosing the web version, in that they tend to use higher ratings.

Methodology

Participants. One-hundred-and-sixty eight undergraduate university students enrolled in a first-year psychology course participated in this study. Age ranged from 17 to 55 years, with a mean of 20.0 and a *SD* of 4.3 years. One-hundred-and-twenty-one (72.0%) were female and 47 (28.0%) were male. Although the pool of potential participants has a considerably higher proportion of females than males (ratio 1male to 1.7 females), the proportion of participating men is still lower than expected, χ^2 (1, N = 168) = 5.69, p <.05. Male participants (M = 20.91, SD = 5.74) were on average more than a year older than women (M = 19.64, SD = 3.55), but this difference was not significant, $t(166) = -1.73$, *ns*. Again, despite the large age range from 17 to 55 years, the age distribution was highly concentrated at the lower range: 62.7% were between the ages of 18 and 19 years, and a total of 92.9% fell within the age range of 17 to 24 years. This heavily skewed distribution is consistent with the typical demographic profile of students registered in Psychology 100.

Of the 168 participants, 134 (79.8%) were Caucasian, 16 (9.5%) Asian, 5 (3.0%) Asian-Caucasian, 4 (2.4%) Persian, 2 (1.2%) East Indian, 4 (2.4%) indicated their ethnicity as Canadian or American, 1 (0.6%) as New Zealand, 1 (0.6%) Sri Lankan, and one participant did not provide ethnicity information.

Measures. This study included the Personal Project Analysis questionnaire (PPA) described above as the core measure. For half of the participants (conditions one and three) this was the only measure, for the other half of participants (conditions two and four) additional items pertaining to subjective well-being (SWLS and PANAS) and personality characteristics (BFI) were included at the end of the PPA questionnaire.

Procedure. Participants for this study were recruited from three sections of the same first year Psychology course at the same time as Cohort Two. At the beginning of December 2003, researchers entered the classrooms and invited students who had not participated in the main study to participate in this randomization study. Students were directed to sign up via the course web site, where they were presented with the informed consent form before being randomly assigned (via automatic redirection to a new web page) to one of four pages, corresponding to the four conditions in the study as described in the next section. If participants were assigned to one of the two web conditions, they were taken directly to the web page with the questionnaire information, and had the option of completing it immediately or bookmarking the page and returning to complete the questionnaire at a later time. Participants assigned to one of the paper versions were asked to pick up the corresponding version of the questionnaire booklet outside the Psychology General Office. The booklets were clearly marked as Version 1 and Version 2. All other procedures were identical to the main study.

Design. Participants were randomly assigned to one of four conditions. In condition one, participants completed the paper questionnaire without the additional items (equal to Cohort One participants), in condition two they also completed the paper questionnaire, but it included the additional subjective wellbeing and personality items

(equal to Cohort Two participants). Similarly, participants in condition three completed the web questionnaire without additional items, and in condition four they completed the web questionnaire, which also included the additional items. The resulting statistical design is a 2 x 2 MANOVA with the factor questionnaire format (paper/web) and the factor additional items (with/without). None of the participants in this randomization study were invited to complete the interview portion.

Results

For Type I error protection, a multivariate analysis of variance comprising the factors format and additional items was applied to the data. Using Wilk's criterion, the combined DVs were not significantly affected by format, $F(29, 133) = .96$, *ns*, partial $\eta^2 = .17$, additional items, $F(29, 133) = .92$, *ns*, partial $\eta^2 = .17$, or their interaction, $F(29, 133) = .75$, *ns*, partial $\eta^2 = .14$, thus not warranting interpretation of univariate analysis of variance results for the dimensions. Number of participants per cell is displayed in Table E1, means and standard deviations of each group, as well as F-statistics are presented in Table E2.

Table E1
Number of subjects in MANOVA (results displayed in Table E2)

	Format		Total
Additional Items	Paper	Web	
Yes	37	51	88
No	44	33	77
Total	81	84	165

Table E2

Means and standard deviations of Randomization Study with F-statistics of multivariate analysis of variance with factors format and additional items

Dimension	Format				Total		F-Statistic (Partial η^2)		
Additional	Paper		Web						
Items	M	SD	M	SD	M	SD	F	AI	F x AI
Difficulty									
Yes	6.09	1.27	6.35	1.24	6.24	1.26			
No	6.28	1.13	5.53	1.42	5.96	1.31	1.52	2.52	6.69*
Total	6.19	1.19	6.03	1.37	6.11	1.28	(.01)	(.02)	(.04)
Stress									
Yes	5.19	1.36	4.83	1.39	4.98	1.38			
No	5.05	1.49	4.41	1.24	4.78	1.42	5.29*	1.62	.42
Total	5.11	1.42	4.66	1.34	4.88	1.40	(.03)	(.01)	(.00)
Challenge									
Yes	6.23	1.33	6.28	1.08	6.26	1.18			
No	6.19	1.20	5.76	1.50	6.00	1.34	.90	1.99	1.47
Total	6.20	1.25	6.07	1.28	6.14	1.26	(.01)	(.01)	(.01)
Negative impact									
Yes	3.89	1.45	3.64	1.65	3.74	1.57			
No	3.57	1.35	3.32	1.46	3.46	1.40	1.13	1.80	.00
Total	3.72	1.40	3.51	1.58	3.61	1.49	(.01)	(.01)	(.00)
Distractibility									
Yes	5.80	1.46	5.29	1.44	5.50	1.46			
No	5.11	1.51	5.14	1.54	5.12	1.51	1.01	3.18^	1.35
Total	5.42	1.52	5.23	1.47	5.33	1.49	(.01)	(.02)	(.01)
Progress									
Yes	5.24	1.20	5.41	1.37	5.34	1.30			
No	5.37	1.24	5.67	1.61	5.50	1.41	1.19	.81	.08
Total	5.31	1.22	5.51	1.47	5.41	1.35	(.01)	(.01)	(.00)
Commitment									
Yes	7.31	.98	7.42	.95	7.38	.96			
No	7.62	1.13	7.59	1.21	7.61	1.16	.06	2.04	.15
Total	7.48	1.07	7.49	1.06	7.48	1.06	(.00)	(.01)	(.00)
Project Stage [a]									
Yes	5.38	1.16	5.32	.82	5.34	.97			
No	5.34	.99	5.48	1.03	5.40	1.00	.07	.16	.41
Total	5.36	1.06	5.38	.90	5.37	.98	(.00)	(.00)	(.00)
Absorption									
Yes	5.45	1.30	5.82	1.19	5.66	1.25			
No	5.61	1.13	5.44	1.70	5.53	1.39	.23	.28	1.69
Total	5.53	1.21	5.67	1.42	5.60	1.32	(.00)	(.00)	(.01)
Importance [a]									
Yes	7.42	.98	7.73	1.04	7.60	1.02			
No	7.44	1.12	7.67	1.56	7.54	1.32	2.13	.01	.06
Total	7.43	1.05	7.71	1.26	7.57	1.16	(.01)	(.00)	(.00)

Table E2 (cont'd)

Dimension	Format				Total		F-Statistic (Partial η^2)		
Additional	Paper		Web						
Items	M	SD	M	SD	M	SD	F	AI	F x AI
Self-identity									
Yes	6.13	1.57	6.47	1.35	6.33	1.45			
No	6.48	1.37	6.46	1.56	6.47	1.45	.51	.56	.61
Total	6.32	1.47	6.47	1.43	6.39	1.44	(.00)	(.00)	(.00)
Value-congruency [a]									
Yes	7.06	1.54	7.25	1.30	7.17	1.40			
No	7.56	1.06	7.14	1.78	7.38	1.42	.29	.80	1.92
Total	7.33	1.32	7.20	1.50	7.27	1.41	(.00)	(.01)	(.01)
Community/Culture									
Yes	4.34	2.01	4.94	1.82	4.69	1.91			
No	4.92	1.79	4.67	2.41	4.81	2.07	.33	.25	1.83
Total	4.65	1.90	4.84	2.07	4.75	1.98	(.00)	(.00)	(.01)
Enjoyment									
Yes	5.83	1.32	5.96	1.40	5.91	1.36			
No	5.70	1.44	5.81	1.39	5.75	1.41	.30	.39	.00
Total	5.76	1.38	5.90	1.39	5.83	1.38	(.00)	(.00)	(.00)
Support									
Yes	5.69	1.75	5.87	1.66	5.80	1.69			
No	5.99	1.56	5.89	1.69	5.95	1.61	.02	.38	.29
Total	5.86	1.65	5.88	1.66	5.87	1.65	(.00)	(.00)	(.00)
Others' view of importance									
Yes	6.03	1.51	6.19	1.20	6.12	1.33			
No	6.31	1.40	5.83	1.68	6.10	1.53	.51	.04	1.96
Total	6.18	1.45	6.05	1.41	6.11	1.43	(.00)	(.00)	(.01)
Visibility									
Yes	5.68	1.48	5.85	1.14	5.78	1.29			
No	5.96	1.49	5.70	1.57	5.85	1.52	.05	.09	.92
Total	5.84	1.49	5.79	1.32	5.81	1.40	(.00)	(.00)	(.01)
Control									
Yes	7.33	1.21	7.21	1.14	7.26	1.16			
No	7.25	1.14	7.25	1.48	7.25	1.29	.10	.01	.10
Total	7.29	1.17	7.22	1.27	7.25	1.22	(.00)	(.00)	(.00)
Initiation									
Yes	7.96	1.18	7.91	1.41	7.93	1.31			
No	7.73	1.34	7.91	1.45	7.81	1.38	.08	.31	.27
Total	7.84	1.26	7.91	1.42	7.88	1.34	(.00)	(.00)	(.00)
Outcome [a]									
Yes	7.41	1.06	7.47	.93	7.44	.98			
No	7.62	1.12	7.68	1.40	7.65	1.24	.13	1.47	.00
Total	7.52	1.09	7.55	1.14	7.54	1.11	(.00)	(.01)	(.00)

Table E2 (cont'd)

Dimension	Format				Total		F-Statistic (Partial η^2)		
Additional	Paper		Web						
Items	M	SD	M	SD	M	SD	F	AI	F x AI
Experimentation									
Yes	5.62	1.90	5.49	1.68	5.54	1.77			
No	5.45	1.79	5.32	2.04	5.39	1.89	.20	.35	.00
Total	5.53	1.83	5.42	1.82	5.47	1.82	(.00)	(.00)	(.00)
Exploration									
Yes	5.42	1.92	5.44	1.67	5.43	1.77			
No	5.36	1.70	5.23	1.85	5.31	1.76	.04	.22	.07
Total	5.39	1.79	5.36	1.73	5.37	1.76	(.00)	(.00)	(.00)
Extension									
Yes	5.91	1.80	5.91	1.66	5.91	1.71			
No	5.83	1.81	5.67	1.65	5.76	1.73	.09	.34	.08
Total	5.86	1.80	5.81	1.65	5.84	1.72	(.00)	(.00)	(.00)
Centrality									
Yes	5.79	1.58	6.00	1.52	5.91	1.54			
No	6.13	1.50	5.81	1.63	5.99	1.55	.05	.09	1.19
Total	5.97	1.54	5.93	1.56	5.95	1.54	(.00)	(.00)	(.01)
Expression									
Yes	5.61	1.78	5.79	1.53	5.72	1.63			
No	5.49	1.62	5.77	1.56	5.61	1.59	.80	.08	.04
Total	5.55	1.68	5.78	1.54	5.67	1.61	(.01)	(.00)	(.00)
Improvement									
Yes	6.50	1.69	6.54	1.77	6.52	1.72			
No	6.22	1.80	6.23	2.16	6.22	1.95	.01	1.03	.00
Total	6.35	1.75	6.42	1.92	6.38	1.83	(.00)	(.01)	(.00)
Enhancement									
Yes	6.79	1.76	6.80	1.62	6.80	1.67			
No	7.09	1.49	6.91	1.55	7.01	1.50	.12	.67	.13
Total	6.96	1.61	6.84	1.58	6.90	1.59	(.00)	(.00)	(.00)
Preservation									
Yes	4.87	1.89	5.35	1.82	5.15	1.85			
No	4.92	1.86	5.13	1.87	5.01	1.86	1.36	.08	.23
Total	4.90	1.86	5.26	1.83	5.08	1.85	(.01)	(.00)	(.00)
Re-establishment									
Yes	5.08	2.01	5.15	1.94	5.12	1.96			
No	4.76	1.84	5.09	1.85	4.90	1.84	.45	.38	.17
Total	4.91	1.91	5.13	1.89	5.02	1.90	(.00)	(.00)	(.00)

Note. F = Format, AI = Additional Items. Multivariate *F* for Format (29, 133) = .96, *ns,* partial η^2 = .17. Multivariate *F* for Additional Items (29, 133) = .92, *ns,* partial η^2 = .17. Multivariate *F* for Format x Additional Items (29, 133) = .75, *ns,* partial η^2 = .14.

[a]Homogeneity of variance differs significantly ($p<.05$).

$^{\wedge}p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Even if the overall multivariate test for Type I error protection is ignored, and one examines differences on the dimension level, only a very few small differences appear. *Stress* ratings were higher for paper respondents, and an interaction between format and additional items was shown for *Difficulty*, indicating that for those participants not completing the additional items, paper respondents experienced higher difficulty, whereas for those completing the additional items, the web respondents rated their projects as being more difficult. For additional items, a trend towards higher ratings of participants completing the additional items on *Distractibility* was observed. Given that effect sizes were quite small (univariate partial η^2 for Stress was .03, for Difficulty .04, and for Distractibility .02), we can conclude that there are no reliable or meaningful differences both with regard to questionnaire format, or the additional items.

Discussion

Initial analyses of Cohort One data (see Table L1, Appendix L) led us to believe that the systematic differences observed between paper and web respondents (paper respondents had higher ratings on almost half of the dimensions) were due to a methodological difference of these two questionnaire formats. We designed this randomization study to prove our point by excluding the possibility of differential selection of the questionnaire format by participants. However, the systematic differences observed previously were not replicated when participants were randomly assigned to either the web or the paper questionnaires (see Table E2).

Were the results from the initial analyses on Cohort One data just a one time artifact? We argue that they were not. Interestingly, applying the same analyses to the

Cohort Two data (see Table L2, Appendix L) shows a similar pattern of results to that of the Cohort One data. Although overall fewer differences were observed, again all the differences are in the direction of higher scores exhibited by paper respondents. Similarly, when combining the data into the total sample, the systematic differences towards higher scores by paper respondents are shown for 14 dimensions at the alpha level of .05 (see Table D3, Factor Format). We can conclude that these differences are not due to the format of the questionnaire (web vs. paper), but reflect true differences between participants who choose to complete the paper or the web format, when given the choice. That is, when given a choice, those who choose the paper questionnaire tend to give higher ratings.

Appendix F

Comparison of Interview Participants with Questionnaire-Only Participants

In order to determine the extent of comparability of the interview sample and the overall sample, one-way between-subjects multivariate analyses of variance (MANOVAs) were performed with interview participation (yes, no) as the independent variable and all 29 personal project dimensions as the dependent variables.

Total *N* of 389 was reduced to 382 through exclusion of seven respondents who had missing scores for Project Stage. Means and standard deviations, as well as F-statistics for each dimension are displayed in Table F1. Using Wilk's criterion for Type I error protection does not warrant interpretation of univariate results for the main effect, $F(29, 352) = 1.43$, *ns*, partial $\eta^2 = .11$.

Disregarding Wilk's criterion and evaluating the differences between participants who decided to partake in the interview portion and those who decided not to, shows interesting trends. For all trends (both at a univariate alpha level of .05 and .10), it is the interview participants who tend to show higher project ratings than respondents who did not participate in the interview portion. Specifically, these trends indicate that interview participants tend to show higher scores on three groups of dimensions: two Stress dimensions (*Difficulty* and *Negative impact*), two Identity/Culture dimensions (*Self-identity*, and *Enjoyment*), and finally, on eight out of nine self dimensions (*Experimentation*, *Exploration*, *Extension*, *Centrality*, *Expression*, *Improvement*, *Enhancement*, and *Re-establishment*, see Table F1). In terms of effect size, the (non-

Table F1

Means and standard deviations of personal project dimensions by interview participation, with F-statistic and partial η^2 from multivariate ANOVA with factor interview participation.

Factor	Interview Participation				Total		Statistic	
	Yes $N = 74$		No $N = 308$		$N = 382$		F	Partial η^2
Dimension	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Stress								
Difficulty	6.36	1.49	5.91	1.52	6.00	1.52	5.18*	.01
Stress	5.12	1.75	5.07	1.63	5.08	1.65	.05	.00
Challenge	6.25	1.55	6.09	1.44	6.12	1.46	.68	.00
Negative impact	4.10	1.44	3.68	1.57	3.76	1.55	4.31*	.01
Efficacious Involvement								
Distractibility	5.19	1.44	5.29	1.47	5.27	1.46	.27	.00
Progress	5.04	1.43	5.16	1.36	5.14	1.37	.45	.00
Commitment	7.48	1.23	7.36	1.12	7.38	1.15	.65	.00
Project Stage	5.31	.97	5.34	.93	5.33	.94	.05	.00
Absorption	5.64	1.35	5.47	1.41	5.50	1.40	.91	.00
Importance	7.79	1.14	7.61	1.13	7.64	1.13	1.51	.00
Identity/Culture								
Self-identity	6.35	1.56	6.01	1.38	6.08	1.42	3.36^	.01
Value-congruency [a]	7.09	1.71	6.79	1.33	6.85	1.42	2.66	.01
Community/Culture	5.03	2.08	4.65	1.98	4.73	2.00	2.06	.01
Enjoyment	6.01	1.42	5.65	1.51	5.72	1.50	3.46^	.01
Community								
Support	5.63	1.81	5.94	1.69	5.88	1.72	1.95	.01
Others' view of importance [b]	6.40	1.67	6.25	1.44	6.28	1.49	.61	.00
Visibility [b]	5.83	1.79	6.12	1.43	6.06	1.51	2.27	.01
Structure								
Control	7.03	1.43	7.30	1.31	7.25	1.33	2.51	.01
Initiation	7.86	1.21	7.69	1.24	7.72	1.23	1.15	.00
Outcome	7.46	1.19	7.47	1.08	7.47	1.10	.00	.00
Future-Other Self								
Experimentation	5.45	1.90	5.04	1.70	5.12	1.75	3.25^	.01
Exploration	5.61	1.85	5.22	1.73	5.29	1.76	2.94^	.01
Extension	5.94	1.74	5.48	1.64	5.57	1.67	4.61*	.01
Present Self								
Centrality	6.15	1.65	5.71	1.53	5.80	1.56	4.61*	.01
Expression	5.93	1.51	5.46	1.52	5.55	1.53	5.81*	.02
Future-Better Self								
Improvement	6.58	1.66	6.14	1.77	6.23	1.75	3.72^	.01
Enhancement	6.87	1.64	6.51	1.53	6.58	1.55	3.34^	.01
Past Self								
Preservation	5.37	1.65	5.05	1.63	5.11	1.63	2.25	.01
Re-establishment	5.63	1.79	5.05	1.81	5.16	1.82	6.16*	.02

Note. Multivariate F for Interview Participation (29, 352) = 1.43, *ns*, partial $\eta^2 = .11$.
[a]Homogeneity of variance differs significantly ($p < .01$). [b]Homogeneity of variance differs significantly ($p < .05$).
^$p < .10$. *$p < .05$.

significant) multivariate effect reflects a moderate overall association between interview participation and the combined DVs, partial $\eta^2 = .11$. The univariate effects for the dimensions as displayed in Table F1 are small.

Although there are no vast overall differences between the subgroup who participated in the interview portion, and the larger sample who only completed the questionnaire portion of this study, these trends indicate that those participants who experience their overall project system as more closely connected to their sense of self (expressed in the trend towards higher ratings on the newly added self dimensions, as well as the meaning dimension Self-identity) may show a higher interest in exploring these relationships in an interview situation. On the other hand, the tendency towards higher Difficulty and Negative impact associated with their projects, may point towards slightly more problematic project constellations in the interview sample. This may reflect the connection reported between being engaged in a higher number of self-focused projects (*intra*personal ones) on the one hand, and problematic project systems and seeking psychological counseling (Salmela-Aro, 1992) on the other. This explanation is strengthened by the present finding that intrapersonal projects are rated particularly highly on the self-related dimensions. However, interview participants also tend to report higher Enjoyment associated with their projects as compared to those who did not participate in the interview. As such, at least some of these participants may be motivated to partake in the interview by a personal inclination towards Openness to Experience, rather than because they experience difficulty with their projects. This could reflect the—initially paradoxical—finding that both individuals with higher Openness and those with higher distress report more intrapersonal, that is, self focused, personal projects.

Appendix G

Means and SD of project dimensions, along with normality indicators and test ($N = 389$)

Conceptual Factor	Descriptives				K-S
Dimension	Mean	SD	Skewness	Kurtosis	Statistic
Meaning					
Importance	7.64	1.13	-.36	.00	.05*
Enjoyment	5.72	1.49	-.16	-.06	.04
Self-identity	6.08	1.41	-.51	.34	.06**
Value-congruency	6.85	1.41	-.74	1.08	.07***
Absorption	5.52	1.40	-.24	.08	.04
Structure					
Control	7.26	1.33	-.49	-.13	.08***
Initiation	7.72	1.24	-.39	.07	.05*
Negative impact	3.79	1.57	.04	-.35	.05
Community					
Visibility	6.07	1.50	-.33	.06	.05**
Others' view of importance	6.29	1.48	-.63	.73	.06**
Support	5.89	1.72	-.23	-.04	.04
Efficacy					
Outcome	7.47	1.11	-.62	.62	.07***
Progress	5.14	1.38	.00	-.45	.04
Project Stage [a]	5.33	.94	-.09	.78	.06**
Stress					
Difficulty	6.02	1.52	-.22	-.18	.05*
Stress	5.10	1.66	-.06	-.54	.04
Challenge	6.13	1.46	-.31	-.10	.06***
Not assigned					
Distractibility	5.29	1.47	-.20	.05	.04
Commitment	7.37	1.16	-.29	-.01	.05*
Community/Culture	4.76	2.01	-.25	-.43	.05*
Present Self					
Centrality	5.81	1.56	-.52	.10	.08***
Expression	5.56	1.52	-.39	.02	.05*
Past Self					
Preservation	5.12	1.63	-.31	.14	.06**
Re-establishment	5.18	1.82	-.50	.20	.08***
Future Self					
Enhancement	6.58	1.54	-.67	.69	.09***
Improvement	6.23	1.74	-.60	.32	.06**
Experimentation	5.13	1.74	-.33	.05	.06**
Extension	5.58	1.66	-.54	.15	.08***
Exploration	5.30	1.76	-.45	.02	.07***

Note. Standard Error of Skewness is .12. Standard Error of Kurtosis is .25. The Kolmogorov-Smirnov (K-S) test was used as test of normality.

[a] N for Project Stage is 382 due to seven participants with missing values.

Appendix H

Pearson-correlations of personal projects variables (N = 389)

	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Stress																				
1	Difficulty (SE)	—																			
2	Stress (SE)	.56***	—																		
3	Challenge (SE)	.73***	.53***	—																	
4	Negative impact (SU)	.23***	.38***	.19***	—																
	Efficacious Involvement																				
5	Distractibility	.13*	.08	.04	.15**	—															
6	Progress (E)	-.24***	-.11*	-.02	-.14**	-.34***	—														
7	Commitment	.08	.10^	.19***	-.03	-.39***	.30***	—													
8	Project Stage	-.01	.06	.14**	-.07	-.22***	.54***	.23***	—												
9	Absorption (M)	.22***	.25***	.43***	.07	-.21***	.41***	.33***	.32***	—											
10	Importance (M)	.27***	.30***	.36***	.05	-.21***	.29***	.47***	.28***	.39***	—										
	Identity/Culture																				
11	Self-identity (M)	.04	-.05	.17***	-.05	-.11*	.33***	.21***	.19***	.32***	.22***	—									
12	Value-congruency (M)	.17**	.04	.33***	-.06	-.20***	.32***	.31***	.24***	.34***	.31***	.58***	—								
13	Community/Culture	.11*	.03	.21***	.02	-.05	.22***	.10*	.13**	.27***	.12*	.33***	.44***	—							
14	Enjoyment (M)	-.07	-.31***	.04	-.23***	-.30***	.49***	.25***	.25***	.44***	.19***	.44***	.33***	.30***	—						
	Community																				
15	Support (C)	.04	.00	.15**	-.17***	-.22***	.34***	.28***	.22***	.26***	.18***	.20***	.31***	.24***	.31***	—					
16	Others' view of importance (C)	.22***	.22***	.27***	.07	-.18***	.32***	.31***	.27***	.35***	.34***	.23***	.36***	.24***	.19***	.49***	—				
17	Visibility (C)	.17***	.25***	.26***	.08	-.23***	.36***	.29***	.33***	.43***	.36***	.29***	.38***	.24***	.25***	.48***	.57***	—			
	Structure																				
18	Control (SU)	-.33***	-.29***	-.22***	-.20***	-.02	.25***	.19***	.11*	.03	.03	.10^	.05	-.02	.17**	.15**	-.01	.07	—		
19	Initiation (SU)	-.03	-.15**	.07	-.18***	.00	.14**	.19***	.17**	.07	.15**	.32***	.27***	.08	.25***	.05	-.01	.07	.44***	—	
20	Outcome (E)	-.26***	-.20***	-.09^	-.13**	-.23***	.40***	.47***	.15**	.20***	.20***	.25***	.18***	.07	.40***	.23***	.20***	.22***	.49***	.29***	—
	Future-Other Self																				
21	Experimentation (S)	.37***	.21***	.47***	.06	-.02	.12*	.10^	.14**	.43***	.13*	.19***	.31***	.36***	.28***	.18***	.23***	.18***	-.19***	.06	-.05
22	Exploration (S)	.31***	.23***	.46***	.04	-.13*	.25***	.17***	.21***	.47***	.24***	.31***	.42***	.44***	.32***	.25***	.28***	.28***	-.10*	.11*	.05
23	Extension (S)	.32***	.21***	.51***	.03	-.13*	.28***	.20***	.23***	.48***	.26***	.36***	.47***	.49***	.38***	.26***	.29***	.31***	-.11*	.14**	.08
	Present Self																				
24	Centrality (S)	.31***	.16**	.40***	.00	-.18***	.29***	.25***	.23***	.46***	.33***	.47***	.62***	.53***	.37***	.30***	.30***	.35***	-.07	.17***	.05
25	Expression (S)	.23***	.11*	.37***	-.02	-.08	.28***	.20***	.20***	.48***	.25***	.43***	.53***	.55***	.43***	.31***	.27***	.30***	.00	.20***	.14**
	Future-Better Self																				
26	Improvement (S)	.23***	.12*	.39***	-.10^	.02	.22***	.13*	.14**	.37***	.20***	.20***	.37***	.38***	.31***	.24***	.21***	.23***	-.04	.15**	.03
27	Enhancement (S)	.30***	.07	.42***	-.09^	-.09^	.25***	.23***	.19***	.42***	.26***	.34***	.55***	.45***	.42***	.27***	.23***	.26***	-.02	.25***	.11*
	Past Self																				
28	Preservation (S)	.14**	.12*	.28***	.04	-.06	.31***	.18***	.26***	.42***	.20***	.34***	.40***	.44***	.32***	.27***	.18***	.28***	-.03	.09^	.10*
29	Re-establishment (S)	.21***	.14**	.29***	.06	.02	.21***	.10*	.14**	.38***	.17**	.34***	.38***	.44***	.30***	.20***	.21***	.26***	-.09	.11*	.05

^ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$ (2-tailed).

(Cont'd)

	Variables	21	22	23	24	25	26	27	28	29
	Future-Other Self									
21	Experimentation (S)	—								
22	Exploration (S)	.81***	—							
23	Extension (S)	.75***	.83***	—						
	Present Self									
24	Centrality (S)	.59***	.70***	.70***	—					
25	Expression (S)	.67***	.75***	.73***	.76***	—				
	Future-Better Self									
26	Improvement (S)	.59***	.63***	.66***	.57***	.60***	—			
27	Enhancement (S)	.66***	.69***	.73***	.70***	.73***	.73***	—		
	Past Self									
28	Preservation (S)	.49***	.60***	.63***	.58***	.61***	.54***	.60***	—	
29	Re-establishment (S)	.57***	.62***	.65***	.63***	.64***	.62***	.64***	.64***	—

*** $p < .001$ (2-tailed).

Appendix I

Factor Loadings of g-, Two-, Three- and Four-Factor Solution of Self-Related Dimensions on the Participant and Project Level

Table I1

Factor loadings of g-, two-, three- and four-factor solution of 9 self-related dimensions on the participant level (N=389)

	g	2-factor		3-factor			4-factor			
Temporal Aspect	1	1	2	1	2	3	1	2	3	4
Self Dimension					PA	F-B	F-O	PR	F-B	PA
Present self										
Centrality	**.83**	**.59**	.58[a]	**.60**	.60[a]	.18	.30	**.82**	.24	.28
Expression	**.87**	**.67**	.55	**.67**	.55	.23	.44	**.71**	.26	.31
Exploration	**.89**	**.84**	.39	**.81**	.35	.29	**.77**	.38	.25	.31
Past self										
Preservation	**.75**	.25	**.84**	.25	**.83**	.24	.27	.25	.19	**.87**
Re-establishment	**.80**	.36	**.79**	.30	**.67**	.47	.25	.35	.45	**.62**
Future self										
Improvement	**.79**	.52[a]	**.60**	.33	.28	**.86**	.32	.20	**.85**	.25
Enhancement	**.86**	**.62**	.60[a]	.51[a]	.41	**.60**	.37	.50	**.62**	.25
Experimentation	**.82**	**.89**	.24	**.84**	.15	.35	**.86**	.24	.29	.18
Extension	**.90**	**.77**	.49	**.72**	.41	.37	**.67**	.39	.34	.36
(Rotation) Sums of Squared Loadings	6.27	3.73	3.15	3.21	2.37	1.80	2.42	2.01	1.72	1.68
% of Variance	69.62	41.40	34.99	35.69	26.35	19.96	26.87	22.30	19.08	18.65
Cumulative %	69.62	41.40	76.39	35.69	62.04	81.99	26.87	49.17	68.25	86.89

Note. F-O = Future-Other; F-B = Future-Better; PR = Present; PA = Past. The highest loading of each dimension is italicized on the respective factor.

[a]Loading is less than .10 lower than the highest loading.

Table I2

Factor loadings of g-, two-, three- and four-factor solution of 9 self-related dimensions on the project level (N ranges from 3088 to 3092)

	g	2-factor		3-factor			4-factor			
Temporal Aspect	1	1	2	1	2	3	1	2	3	4
Self Dimension			F- O	F- O		PR	F-O	PR	PA	F-B
Present self										
Centrality	**.77**	**.72**	.37	.24	.34	**.79**	.23	**.80**	.28	.19
Expression	**.78**	**.62**	.47	.33	.21	**.82**	.34	**.82**	.18	.12
Exploration	**.82**	.35	**.82**	**.77**	.23	.40	**.79**	.36	.23	.16
Past self										
Preservation	**.66**	**.77**	.16	.14	**.77**	.27	.23	.19	**.88**	.12
Re-establishment	**.68**	**.78**	.18	.14	**.72**	.35	.11	.36	**.62**	.38
Future self										
Improvement	**.72**	**.53**	.50[a]	.53	**.67**	.04	.32	.15	.23	**.86**
Enhancement	**.82**	**.65**	.50	.44[a]	**.50**	.49[a]	.32	**.56**[b]	.21	.56[ab]
Experimentation	**.72**	.13	**.89**	**.88**	.11	.19	**.86**	.18	.04	.23
Extension	**.80**	.38	**.77**	**.74**	.32	.30	**.74**	.27	.29	.24
(Rotation) Sums of Squared Loadings	5.12	3.09	2.96	2.57	2.14	2.02	2.35	2.04	1.50	1.39
% of Variance	56.93	34.28	32.93	28.58	23.73	22.46	26.10	22.70	16.70	15.43
Cumulative %	56.93	34.28	67.22	28.58	52.31	74.77	26.10	48.80	65.50	80.93

Note. F-O = Future-Other; F-B = Future-Better; PR = Present; PA = Past. The highest loading of each dimension is italicized on the respective factor.

[a]Loading is less than .10 lower than the highest loading. [a]Enhancement loads with about equal strength on factor 2 (.56*3*), and on factor 4 (.56*0*).

Appendix J

Intercorrelations Within Factor Domains on the Participant and Project Level

Table J1

Intercorrelations of unit-scaled traditional factors on the participant level (N=389)

Traditional factors	1	2	3	4	5
1: Stress	-	.11*	.04	.20***	-.29***
2: Efficacious Involvement		-	.49***	.53***	.31***
3: Identity/Culture			-	.44***	.28***
4: Community				-	.16**
5: Structure					-

*$p < .05$. **$p < .01$. ***$p < .001$

Table J2

Intercorrelations of unit-scaled self factors on the participant level (N=389)

Self factors	1	2	3	4
1: Future-Other	-	.79***	.76***	.71***
2: Present		-	.74***	.73***
3: Future-Better			-	.71***
4: Past				-

***$p < .001$.

Table J3

Intercorrelations of unit-scaled traditional factors on the project level(N = 3090[a])

Traditional factors	1	2	3	4	5
1: Efficacious Involvement	-	.02	.49***	.48***	.23***
2: Stress		-	-.15***	.21***	-.28***
3: Identity/Culture			-	.36***	.27***
4: Community				-	.02
5: Structure[b]					-

[a]Two projects excluded due to missing data. [b]N was 3089 for Structure due to missing data.

***$p < .001$

Table J4

Intercorrelations of unit scaled self factors on the project level (N = 3092)

Self factors	1	2	3	4
1: Future-Other	-	.68***	.52***	.57***
2: Present		-	.64***	.57***
3: Past			-	.53***
4: Future-Better				-

***$p < .001$.

Appendix K

Mean, SD, and Normality Parameters for Subjective Well-Being and Personality Measures (N = 184)

	Descriptives				K-S
	Mean	SD	Skewness	Kurtosis	
Subjective Well-Being					
Life Satisfaction	4.91	1.21	-.41	-.59	.10***
Positive Affect	3.23	.69	-.10	-.35	.05
Negative Affect	2.29	.72	.63	.29	.09**
Affect Balance	.94	1.17	-.25	-.50	.07*
Personality					
Extraversion	3.34	.85	-.23	-.66	.08**
Agreeableness	3.89	.56	-.69	.76	.09**
Conscientiousness	3.45	.71	-.19	-.52	.07*
Neuroticism	2.99	.90	.10	-.70	.05
Openness	3.58	.69	-.18	-.66	.08**

Note. Standard Error of Skewness is .18. Standard Error of Kurtosis is .36. The Kolmogorov-Smirnov (K-S) test was used as test of normality.

Appendix L

Comparison of Questionnaire Format for Cohort One and Two Data

For data from Cohort One and Two, separate one-way between-subjects multivariate analyses of variance (MANOVAs) were performed with questionnaire format (paper, web) as the independent variable and all 29 personal project dimensions as the dependent variables.

Cohort One Data. Total *N* of 205 was reduced to 202 through exclusion of three paper respondents who had missing scores for Project Stage. Means and standard deviations, as well as F-statistics for each dimension are displayed in Table L1. Using Wilk's criterion for Type I error protection warrants interpretation of univariate results for the main effect format, $F(29, 172) = 1.69$, $p < .05$, partial $\eta^2 = .22$.

Differences for format were consistently in the direction of paper respondents showing higher project ratings than web respondents. Specifically, paper respondents show higher scores on 13 project dimensions: *Enjoyment*, *Difficulty*, *Visibility*, *Control*, *Challenge*, *Absorption*, *Centrality*, *Expression*, *Enhancement*, *Experimentation*, *Exploration*, *Extension*, and *Re-establishment* (see Table L1). In terms of effect size, the multivariate effect reflects a moderate association between format and the combined DVs, partial $\eta^2 = .22$. The univariate effects for the significant dimensions as displayed in Table L1 range from small (partial $\eta^2 = .02$) to moderate (partial $\eta^2 = .08$).

Table L1

Means and standard deviations of Cohort One data by questionnaire format with F-statistic and partial η^2 from multivariate ANOVA with factor format

Factor	Format				Total		Statistic	
	Paper $N = 101$		Web $N = 101$		$N = 202$		F	Partial η^2
Dimension	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Stress								
Difficulty	6.14	1.52	5.62	1.43	5.88	1.49	6.29*	.03
Stress	5.42	1.62	5.16	1.63	5.29	1.63	1.36	.01
Challenge [b]	6.41	1.27	5.92	1.62	6.17	1.47	5.57*	.03
Negative impact	3.87	1.63	3.70	1.53	3.79	1.58	.62	.00
Efficacious Involvement								
Distractibility [b]	4.96	1.60	5.10	1.11	5.03	1.37	.48	.00
Progress	5.45	1.28	5.28	1.25	5.37	1.27	.89	.00
Commitment	7.49	1.15	7.43	1.12	7.46	1.13	.14	.00
Project Stage	5.40	.99	5.39	.93	5.40	.96	.00	.00
Absorption	6.00	1.19	5.26	1.29	5.63	1.30	17.53***	.08
Importance	7.86	1.10	7.66	1.16	7.76	1.13	1.56	.01
Identity/Culture								
Self-identity	6.26	1.40	6.08	1.38	6.17	1.39	.87	.00
Value-congruency [a]	7.13	1.09	6.79	1.36	6.96	1.24	3.81^	.02
Community/Culture	4.94	1.87	4.63	2.13	4.79	2.01	1.15	.01
Enjoyment	6.02	1.46	5.51	1.55	5.77	1.52	5.65*	.03
Community								
Support	6.34	1.55	6.04	1.68	6.19	1.62	1.74	.01
Others' view of importance	6.56	1.35	6.19	1.62	6.37	1.50	3.13^	.02
Visibility	6.68	1.36	6.04	1.49	6.36	1.46	10.19**	.05
Structure								
Control	7.54	1.16	7.14	1.21	7.34	1.20	5.89*	.03
Initiation	7.91	1.03	7.65	1.19	7.78	1.11	2.73	.01
Outcome	7.57	1.00	7.44	1.11	7.51	1.06	.79	.00
Future-Other Self								
Experimentation	5.37	1.57	4.80	1.89	5.09	1.75	5.56*	.03
Exploration	5.63	1.56	5.16	1.81	5.39	1.70	3.91*	.02
Extension	5.98	1.52	5.39	1.80	5.69	1.69	6.42*	.03
Present Self								
Centrality [a]	6.23	1.24	5.64	1.67	5.93	1.50	8.17**	.04
Expression [b]	5.93	1.26	5.37	1.69	5.65	1.51	7.08**	.03
Future-Better Self								
Improvement	6.39	1.65	6.11	1.87	6.25	1.77	1.26	.01
Enhancement [b]	6.78	1.25	6.32	1.82	6.55	1.58	4.27*	.02
Past Self								
Preservation	5.38	1.45	5.13	1.72	5.26	1.59	1.27	.01
Re-establishment	5.45	1.79	4.90	1.86	5.18	1.84	4.52*	.02

Note. Multivariate F for Format (29, 172) = 1.69, $p < .05$, partial $\eta^2 = .22$.

[a]Homogeneity of variance differs significantly ($p < .05$). [b]Homogeneity of variance differs significantly ($p < .01$).

^$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Cohort Two Data. Total *N* of 184 was reduced to 180 through exclusion of four paper respondents who had missing scores for Project Stage. Means and standard deviations, as well as F statistics and partial η^2 for each dimension are displayed in Table L2. Using Wilk's criterion, the combined DVs were significantly affected by format, $F(29, 150) = 2.05$, $p < .01$, partial $\eta^2 = .28$.

Using Wilk's criterion for Type I error protection interpretation of univariate results is warranted for the main effect format for each dimension (alpha level is .05). Again, differences for version were consistently in the direction of paper respondents showing higher project ratings than web respondents. Specifically, paper respondents show higher scores on the following six project dimensions: *Difficulty*, *Challenge*, *Community/Culture, Centrality*, *Extension*, and *Improvement* (see Table L2). In terms of effect size, the multivariate effect reflects a strong association between format and the combined DVs, partial $\eta^2 = .28$. The univariate effects for the significant dimensions as displayed in Table L2 are small and range from partial $\eta^2 = .03$ to .04.

Table L3 displays an overview of personal projects dimensions with significant differences by format in the overall sample, as well as Cohort One and Two data for easier comparison.

Table L2

Means and standard deviations of Cohort Two data by questionnaire format with F-statistic and partial η^2 from multivariate ANOVA with factor format

Factor	Format				Total		Statistic	
	Paper $N = 40$		Web $N = 140$		$N = 180$		F	Partial η^2
Dimension	*M*	*SD*	*M*	*SD*	*M*	*SD*		
Stress								
Difficulty	6.62	1.55	5.99	1.53	6.13	1.55	5.30*	.03
Stress	5.09	1.77	4.78	1.63	4.85	1.66	1.11	.01
Challenge [b]	6.61	1.47	5.93	1.42	6.08	1.45	7.17**	.04
Negative impact	3.71	1.66	3.74	1.49	3.73	1.52	.01	.00
Efficacious Involvement								
Distractibility [b]	5.35	1.51	5.59	1.51	5.54	1.51	.81	.01
Progress	4.80	1.39	4.91	1.47	4.88	1.45	.17	.00
Commitment	7.16	1.24	7.32	1.14	7.29	1.16	.59	.00
Project Stage	5.31	.90	5.24	.92	5.26	.92	.20	.00
Absorption	5.61	1.43	5.29	1.52	5.36	1.50	1.48	.01
Importance	7.47	.88	7.52	1.18	7.51	1.12	.05	.00
Identity/Culture								
Self-identity	6.16	1.28	5.93	1.50	5.98	1.46	.77	.00
Value-congruency [a]	7.13	1.41	6.61	1.61	6.73	1.58	3.40^	.02
Community/Culture	5.28	1.99	4.48	1.98	4.66	2.01	5.14*	.03
Enjoyment	5.79	1.64	5.63	1.42	5.67	1.47	.36	.00
Community								
Support	5.45	1.65	5.57	1.80	5.54	1.76	.14	.00
Others' view of importance	6.05	1.64	6.20	1.42	6.17	1.47	.32	.00
Visibility	5.70	1.49	5.75	1.53	5.74	1.51	.03	.00
Structure								
Control	7.10	1.21	7.16	1.53	7.15	1.46	.06	.00
Initiation	7.93	1.21	7.58	1.38	7.66	1.35	2.04	.01
Outcome	7.69	1.05	7.34	1.16	7.42	1.14	2.98^	.02
Future-Other Self								
Experimentation	5.55	1.81	5.05	1.71	5.16	1.74	2.64	.02
Exploration	5.52	1.88	5.08	1.80	5.18	1.82	1.83	.01
Extension	5.93	1.70	5.30	1.61	5.44	1.65	4.68*	.03
Present Self								
Centrality [a]	6.16	1.53	5.50	1.62	5.65	1.62	5.35*	.03
Expression [b]	5.73	1.46	5.35	1.55	5.44	1.54	1.93	.01
Future-Better								
Improvement	6.73	1.58	6.05	1.76	6.20	1.74	4.89*	.03
Enhancement [b]	6.87	1.57	6.54	1.52	6.61	1.53	1.44	.01
Past								
Preservation	4.67	1.58	5.02	1.69	4.95	1.67	1.42	.01
Re-establishment	5.56	1.64	5.02	1.83	5.14	1.80	2.87^	.02

Note. Multivariate F for Format (29, 150) = 2.05, $p < .01$, partial $\eta^2 = .28$.
^$p < .10$. *$p < .05$. **$p < .01$.

Table L3

Overview of format differences on personal project dimensions by samples

Factor Dimension	Sample: Cohort One $N = 202$	Cohort Two $N = 180$	Total Sample
Stress			
Difficulty	X	X	X
Stress			
Challenge	X	X	X
Negative impact			
Efficacious Involvement			
Distractibility			
Progress			
Commitment			
Project Stage			
Absorption	X		X
Importance			
Identity/Culture			
Self-identity			
Value-congruency			X
Community/Culture		X	X
Enjoyment	X		
Community			
Support			
Others' view of importance			
Visibility	X		
Structure			
Control	X		
Initiation			X
Outcome			
Future-Other Self			
Experimentation	X		X
Exploration	X		X
Extension	X	X	X
Present Self			
Centrality	X	X	X
Expression	X		X
Future-Better Self			
Improvement		X	X
Enhancement	X		X
Past Self			
Preservation			
Re-establishment	X		X

Note. X = respective dimension differs significantly by format on at least $p < .05$.