

GENERATIVITY VS STAGNATION: A STUDY IN VALIDATION OF A  
MEASURE

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## ABSTRACT

The main task of generativity vs stagnation, Erik Erikson's seventh stage of normative psychosocial development, is to establish and guide the next generation through one's acts of care. Five broad statuses or prototypic styles of resolving the issues of this stage are proposed using combinations of (a) an individual's level of vital involvement, or active concern for the growth of the self and others, and (b) an individual's tolerance of different ideas, traditions, and values, which, by extension, determines the scope of caregiving concern. The *Generative* status is characterized by high vital involvement and tolerance, and represents the most positive psychosocial outcome. The *Pseudogenerative-Agentic* status is high in vital involvement and tolerance for self but not for others, while *Pseudogenerative-Communal* is high in vital involvement and tolerance for others but not for self. The *Conventional* status, high in vital involvement for both self and others, is low in tolerance across the board. *Stagnant* reflects the poorest psychosocial outcome, and is low in vital involvement and tolerance generally. A semi-structured interview constructed to measure the statuses generated continuous and categorical ratings which were used to investigate inter-rater reliability and validity of the generativity prototypes (N=100). The dimensional scalings obtained higher reliability than the strictly categorical judgements, reaching acceptable levels. Convergence was

obtained between prototype ratings and two scale measures of generativity, with the *Generative* and *Stagnant* prototypes scoring highest and lowest respectively. Intermediate statuses also scored higher than *Stagnant* on one or the other of these scales. In addition, *Generative* and *Conventional* prototypes scored significantly higher than *Stagnant* on a measure of psychosocial adjustment. *Generative* and *Conventional* statuses were distinguished on NEO scales of overall Openness to Experience and Openness to Values, with *Generative* scoring significantly higher than *Conventional*. Linear generativity scales were uncorrelated with NEO Values, suggesting conceptual differences between the proposed status approach and other generativity measures.

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## CHAPTER I

## INTRODUCTION

Generativity and Adult Development

Generativity is a quality attributed to adults which encompasses procreative, productive, and creative activities, as well as those devoted to nurturing and guiding others. In Erikson's (1963) schema, adults who have mastered the adolescent identity and early adulthood intimacy issues of "who am I" and "who do I love" develop a sense of caring responsibility towards the next generation. Non-generative individuals experience a pervasive feeling of self-absorption, stagnation, and impoverished interpersonal relations. However, as is the case for all of Erikson's lifespan developmental stages, a dynamic tension exists between these two possible outcomes, a tension that, at generativity, pits "care" for others against "rejectivity" of others.

Erikson's psychosocial theory of lifespan development has received widespread recognition as a valuable framework for understanding human growth and development. Some theorists have incorporated elements of his schema into their own conceptualizations of adult development (Levinson, 1977, 1986; Vaillant, 1977; Vaillant & Milofsky, 1980), while several others have devoted careful thought to the elaboration of the key features of generativity more strictly within Erikson's model (Browning, 1975; Kotre, 1984; McAdams, Ruetzel & Foley,

1986). Although largely neglected until recently, issues of measurement and validity have begun to receive more direct attention in generativity research (McAdams et al., 1986; McAdams, Albrecht, de St. Aubin, Hoffman, Nestor & Sharma, 1989; McAdams & de St. Aubin, in press; Ryff & Heincke, 1983; Snarey, Son, Kuehne, Hauser & Vaillant, 1987; Van de Water & McAdams, 1989). Several investigators have designed measures to tap into the entire structure of Erikson's lifespan model (Darling-Fisher & Kline Leidy, 1988; Domino & Affonso, 1990; Hawley, 1984; Ochse & Plug, 1986).

However, work in defining, measuring, and validating Erikson's construct is still in the early stages, and many - if not most - questions remain as yet unanswered. Given the scope of Erikson's vision of the generative adult, the implications of the resolution of this stage on an individual and societal level argue for a thorough treatment, both theoretically and empirically, of Erikson's proposals.

#### The Status Approach to Generativity

One possible way to investigate generativity vs stagnation involves the delineation of prototypic styles, or statuses, of resolution of the issues which Erikson considered fundamental to adulthood. This approach seeks to describe qualitatively different ways in which the attributes of generativity and stagnation may combine in adults' expression of generativity. Status typology research has proven fruitful in investigations into the psychosocial stages of

identity (Marcia, 1966) and intimacy (Orlofsky, Marcia & Lesser, 1973).

Five broad styles of resolving the issues of this stage were proposed for empirical investigation in an initial study (Bradley, 1988) devoted primarily to the theoretical elaboration of the statuses and assessment of inter-rater reliability obtained using a semi-structured interview measure. The statuses are defined using combinations of (a) an individual's level of vital involvement, or active concern for the growth of the self and others, and (b) an individual's tolerance of different ideas, traditions, and values, which, by extension, determines the scope of caregiving concern. The *Generative* style is characterized by high vital involvement and tolerance, and represents the most positive psychosocial outcome. The *Pseudogenerative-Agentive* style is high in vital involvement and tolerance for self but not for others, while *Pseudogenerative-Communal* is high in vital involvement and tolerance for others but not for self. The *Conventional* style, high in vital involvement for both self and others, is low in tolerance across the board. *Stagnant* reflects the poorest psychosocial outcome, and is low in vital involvement and tolerance generally.

Although inter-rater reliability in the initial generativity status study reached acceptable levels after consensus on additional status classifications was obtained, pre-consensus figures ( $k=.54$ , or 69%) indicated a need for further refinement of scoring procedures. An attempt to

establish convergence with a scale measure of generativity (Ryff & Heincke, 1983) was hampered by small sample size and possible theoretical differences in interpretation of Erikson's construct.

### Description of the Study

The purpose of this study was to further investigate the reliability and validity of the Generativity Status Measure. Assessment of inter-rater reliability was accomplished through kappa analyses of categorical classifications, and through the calculation of coefficient alpha and standard error of measurement on dimensional scalings of each generativity status.

Efforts to investigate the construct validity of the generativity statuses took three directions. First, convergence was sought between the Generativity Status Measure and two scale measures of generativity, the Loyola Generativity Scale (McAdams & de St. Aubin, in press), and the generativity subscale from Ochse and Plug's (1986) scales of Erikson's first 7 stages. Second, overall psychosocial adjustment, in an Eriksonian sense, associated with the various generativity statuses was assessed by collapsing the subscales of a measure of Erikson's first 6 stages (Ochse & Plug, 1986) into a single scale score. Finally, Costa and McCrae's (1985) NEO Openness to Experience domain scale, and a particular constituent subscale thereof, the Values facet scale, were used to distinguish statuses theoretically high in

tolerance from those theoretically low in tolerance, and to explore possible differences in interpretation of generativity vs stagnation between the status measure proposed here and other scale measures.

One hundred adults between the ages of 42 and 64, evenly divided by gender, took part in the study. These ages were selected as representing a time when generativity issues should largely be resolved; hence, final outcomes would possibly be more clearly observable. They were interviewed using the Generativity Status Measure first, then requested to complete a questionnaire package containing the above-mentioned scales.

### Overview of the Thesis

Chapter I describes the study in brief. Chapter II outlines Erikson's psychosocial theory in general, and summarizes his conceptualization of generativity vs stagnation. A review of theoretical elaborations and empirical investigations of generativity vs stagnation is undertaken, and the generativity status approach is considered in detail. The chapter closes with a discussion of the objectives of the study, the rationale for revisions of the scoring procedures used in the Generativity Status Measure to include multidimensional scalings, and the hypotheses investigated. Chapter III outlines the methodology of the study. The results of the investigation are contained in Chapter IV, as they pertain to inter-rater reliability, and



the convergence of the Generativity Status Measure with other measures of generativity, overall psychosocial adjustment, and Openness to Experience scales. Chapter V discusses the implications of the results of the study, the limitations of this investigation, and future directions for generativity status research.

## CHAPTER II

## LITERATURE REVIEW

Psychosocial Framework for Generativity

Erik Erikson's (1963) elaboration of the developmental tasks associated with middle adulthood is situated in the context of an integrated theory of human development from birth to death. Drawing upon the biological principle of epigenesis, Erikson articulated a sequential stage framework for ego development in which each growth period is systematically related to all others, and "exists in some form before "its" decisive and critical time normally arrives so that the whole ensemble depends on the proper development in the proper sequence of each item" (Erikson, 1982, p. 29). In Erikson's schema, biological (soma) and intrapsychic (psyche) processes continually interface with the cultural and historical moment in which the individual lives (ethos) to promote ego growth and adaptation.

The model proposes eight successive "crises" or dynamic stages of development across the lifespan, in which the individual confronts, in turn, issues of basic trust vs mistrust, autonomy vs shame and doubt, initiative vs guilt, identity vs identity confusion, intimacy vs isolation, generativity vs stagnation, and integrity vs despair. At each choice point, the individual enters a "crucial period of increased vulnerability and heightened potential" (Erikson,

1968, p. 96) where the timing is propitious to expanded ego functioning through the modalities of the soma, psyche and ethos, although poor developmental outcomes and regression are always possible.

Ideally, the individual will arrive at "a creative tension between the polar alternatives, with an emphasis on the more positive pole" (Marcia, 1976, p. 6), rather than a stark alignment with either. Successful resolution results in the development of the particular ego strength most appropriate to the stage at hand, creating in the child the foundations for hope, will, purpose and competence; in the adolescent, fidelity, or a sense of unity and continuity; and in the adult, a capacity for love, care and wisdom. Failure at any developmental task implies that a corresponding core pathology or antipathy inimical to these basic ego strengths will dominate. While each stage's resolution has implications for subsequent developmental gains, poor resolution of one crisis does not preclude a return to and reworking of those issues at a later date.

### Generativity Within Psychosocial Theory

Generativity vs self-absorption and stagnation, the seventh stage of psychosocial development, heralds the end of early adulthood, with its emphasis on intimacy vs isolation, and extends through middle age, to be succeeded by issues of integrity vs despair in the final years. Fuelled by "a gradual expansion of ego-interests and libidinal energy in

that which is generated" (Erikson, 1963, p. 267), the main psychosocial task of generativity is to establish and guide the next generation through one's acts of care.

There is, however, considerable breadth to the construct beyond the prototypical generative endeavors of procreation and parenting. In fact, procreation itself is not a guarantee of generativity, particularly if previous stage issues have been inadequately resolved (Erikson, 1964). Similarly, adults who elect not to have children - a choice widely possible only recently through modern techniques of birth control - can nevertheless be generative through sublimation of the drive energies in a "new generative ethos [which] may call for a more universal care concerned with qualitative improvement in the lives of all children" (Erikson, 1982, p. 68).

Generativity is achieved through engagement in a wide variety of activities: nurturance of one's productive output, meeting the needs of the next generation, integration of work life with one's family or intimate life, and a creative articulation of "cultural potentials within the emerging world image" (Holsizer, Murphy, Noam, Taylor, Erikson, & Erikson, 1982, p. 269). Generativity is contained in "various forms of selfless "caring" [which] potentially extend to whatever a man [or woman] generates and leaves behind, creates and produces" (Erikson, 1963, p. 267), and is operative in virtually any situation in which one is called upon to be responsible for others. "Parenthood", wrote Erikson, "is, for most, the first, and for many, the prime generative

encounter, yet the perpetuation of mankind challenges the ingenuity of workers and thinkers of many kinds". (Erikson, 1964, pp. 132-133).

Central to the concept of generativity is the interdependency between that which is being cared for and the caregiver, between the younger generation and the older. The adult transmits personal values and those of his or her society to the new generation, acts as a mentor and model, and sets the stage for the continuance of cultural symbols and traditions. However, developmental benefits are reaped not only by those guided, by also by those engaged in generative pursuits, for "mature man needs to be needed, needs guidance as well as encouragement from what has been produced and must be taken care of" (Erikson, 1963, pp. 266-267). Erikson views psychosocial development as one of constant renewal of society as well as the self: "The cogwheeling stages of childhood and adulthood are, as we can see in conclusion, truly a system of generation and regeneration - for into the system emerge those societal values to which the institutions and traditions of society attempt to give unity and permanence" (Erikson, 1964, p. 152). Ultimately, the goal of generativity is to perpetuate humankind and at the same time advance personal development (Erikson, 1982).

Difficulty in achieving a sense of generativity can lead to stagnation, self-absorption, and indulgence in oneself as if one were one's own only child. It is also characterized by a regression to previous crises, particularly that of intimacy

vs isolation, in the form of "an obsessive need for pseudointimacy...often with a pervading sense of stagnation and interpersonal impoverishment" (Erikson, 1963, p. 103). If "care" is the ego strength developed through generativity, then "rejectivity", Erikson proposes, is the core pathology of stagnation, resulting in the exclusion of certain people or groups from one's caregiving activity. Through the vehicle of "authoritism", the "ungenerous and ungenerative use of sheer power for the regimentation of economic and familial life" (Erikson, 1982, p. 70), rejectivity can be directed against one's children, other family or community members, and even oneself. Erikson spoke of the generalized form of rejectivity in terms of "pseudospeciation", which is manifested as prejudices against all manner of thought or people different from oneself (Erikson, 1982).

Of course, some degree of discrimination and selection is unavoidable, for in order to care for some things, others must necessarily be eliminated from one's sphere of activity and concern. Similarly, Erikson's conceptualization of generativity does not preclude the exercise of authority, but rather identifies the more authoritarian styles and expressions as maladaptive.

As with all stages of psychosocial development, successful resolution involves achieving a balance between the two poles, with elements of stagnation present even in those most generative (Erikson, 1982). Indeed, periods of fallowness and withdrawal from generative concerns would seem

necessary to the continued growth of the adult individual: a time for personal regeneration and incorporation of that which is received from those cared for; a time to reflect and set the stage for the germination of new ideas and further periods of productivity.

### Theoretical and Empirical Investigations of Generativity

Although the construct Erikson envisioned is enormously rich in scope and application, the theoretical and practical implications of generativity vs stagnation are only beginning to attract concerted research attention. At this early stage of investigation, competing interpretations of Erikson's construct and contradictory findings await further clarification. Nevertheless, both theoretical discussions and empirical investigations, although still somewhat sparse, have begun to inform a growing sense of the processes, key features, and chronology involved in this stage of life.

Two well-known theorists, Levinson (1977, 1986) and Vaillant (Vaillant, 1977; Vaillant & Milofsky, 1980), incorporated elements of Erikson's theory into their own modified conceptualizations of adult developmental trajectories. Levinson's interview data of 40 men between 35 and 45 years of age culminated in a model of adult male development divided into early adulthood (17-45 years), middle adulthood (40-65 years), late adulthood (60-85 years) and late late adulthood (80+). During these phases of development, characterized by alternate stable and transitional periods,

the individual builds a life structure which is renewed with each progressive stage shift (Levinson, 1977). In early adulthood, men focus on "climbing the ladder" of the corporate world. Only at the midlife transition, between the ages of 40-45, does generativity truly come into play. Providing the transition occurs satisfactorily, men in their 40's and 50's become "senior members" of their worlds, and "are responsible not only for...[their] own work and perhaps the work of others, but also for the development of the current generation of young adults who will soon enter the dominant generation" (Levinson, 1986, p.6). Vaillant, through general psychiatric interviews of 95 Harvard educated men (Vaillant, 1977) and second interviews of these plus 392 core city men (Vaillant & Milofsky, 1980), came to postulate additional stages of development to Erikson's schema: career consolidation vs self-absorption just prior to generativity; and keepers of the meaning vs rigidity between generativity and Erikson's final stage of integrity vs despair. The task of career consolidation is seen to involve clear occupational specialization identifications, typically through the internalization of mentors. "Perpetual Boys", who failed to progress beyond career consolidation, "never reached the point where they 'worried less about myself and more about the children'", and consequently faced stagnation (Vaillant, 1977, p. 228). Generative men, characterized by mature defense mechanisms, became leaders concerned with the well-being of all those around them. Socioeconomic factors seemed unrelated



to progression through identity, intimacy and career consolidation stages; however, in order to successfully negotiate generativity, good resolutions of previous stage issues were necessary (Vaillant & Milofsky, 1980). Although largely speculative, Vaillant and Milofsky's post-generative stage addition during the 50's and 60's seeks to separate care and wisdom aspects of generativity, and focuses on the transmission and preservation of cultural norms. The danger here lies in developing an "increasing rigidity that reflects changes in intellectual function often seen after midlife" (Vaillant & Milofsky, 1980, p. 1350).

That Vaillant and Levinson independently sought to redress a seeming omission in Erikson's theory, through an achievement-oriented "missing link" between the stages of intimacy and generativity, speaks to the potential importance of these issues at generativity. However, while their alternative views of adult development may be of relevance to male trajectories, they shed little light on female issues, and their departures from Erikson's comprehensive framework leave problematic theoretical gaps. A serious drawback to Levinson's developmental schema lies in its lack of attention and theoretical access to childhood issues, and their possible differential impact on the adult, while Vaillant fails to adequately flesh out the accompanying ego strengths, antipathies, and growth features of his two additional stages in terms of psyche, soma and ethos. Moreover, Vaillant and Milofsky (1980) leave unclear the distinction between the

wisdom gained through the sub-stage of keepers of the meaning vs rigidity and the wisdom postulated by Erikson as the ego strength of integrity vs despair. From a theory construction viewpoint, staying within the bounds of Erikson's theory allows for consistency, on all levels of the theory, in investigating the interrelationship among the adjacent adult life cycle stages, and between these and earlier stage resolutions. Moreover, it provides an integrated framework for monitoring the effects of societal and cultural shifts on the lives of individual men and women, whether this manifests in ways consonant with Erikson's developmental schema, or in divergent patterns by gender or other factors.

Further theoretical insight into the generativity construct stems from Kotre's (1984) description of generative outcomes in terms of agency and communion. In Kotre's conceptualization, agentic generativity exists "if the creation is simply a clone or a monument to the self" (Kotre, 1984, p.16), in which "the agentic progenitor is willing to devour progeny, to possess them narcissistically and feed himself on their talents and admiration" (Kotre, 1984, p. 18). The communal mode of generativity represents the more mature form of caring, in which "life interest is transferred to the generative object with the result that its life becomes more important than the progenitor's" (Kotre, 1984, p. 16). These definitions of agency and communion, within a generativity context, are consistent with Bakan's (1966) notion of agency as associated with self-protection, self-absorption and

isolation, and communion as manifested through openness and union with others.

Kotre's development of the role of agency in generative issues represents an astute underscoring of the potential dangers of "excessive self-love based on a too strenuously self-made personality" (Erikson, 1963, p. 267). His view of mature generativity, however, seems nevertheless difficult to reconcile with Erikson's "new version of the Golden Rule: do unto another what will advance the others' growth even as it advances your own" (Erikson, 1982, p. 94). By contrast, the theme of generativity as a blend of agency and communion is evident in McAdams et al.'s (1986) study of the relationship between power and intimacy motives in TAT scores, and generativity at midlife as shown through adults' plans for the future. There, the formulation of a generative act is hypothesized as the communal part of the process, and the performance thereof as the agentic component: "one generates, or produces or creates a product which represents an extension of the self...then, one renounces ownership of the product, granting it a certain degree of autonomy and offering it up to others." (McAdams et al., 1986, p. 802). Findings were seen to lend tentative support to the notion that achievement of generativity "calls on an adult's fundamental need to feel close and to feel strong vis-a-vis others" (McAdams et al., 1986, p. 805).

Pita (1986) explored the influence of agency and communion in parenting, and applied her conclusions to

generativity. Drawing on White's conception of agency as "self-competencies" that "reflect a forceful, active self...attempting to achieve a goal" (White, 1979, p. 300), Pita investigated identity, intimacy, and the rated level of agency and communion in subjects' own parents' child-rearing practices as predictors of parental generativity in a small sample of married fathers ( $N=24$ ) and mothers ( $N=24$ ) between 25 and 30 years of age. Newberger's (1978) Parental Awareness Interview served as an approximate measure of generativity. Childhood experience of mothers' emphasis on communality over agency was positively associated with male subjects' parental awareness score, and negatively associated with female subjects' parental awareness score, while fathers' levels of agency and communion seemed unrelated to achievement of generativity via parental awareness. Identity was found to be a positive predictor of parental awareness for men, as was intimacy for women. While Pita's study suggests that agency and communion may exert influences on children and their subsequent development of generativity in complex ways which warrant further investigation, the use of parental awareness as a measure of generativity is questionable. Pita (1986) acknowledges that Newberger's (1978) instrument does not purport to measure the parent's actual care for the child, nor does it focus specifically on psychosocial developmental tasks. Moreover, early adulthood may not be the most propitious time to assess generativity, as the preceding

psychosocial tasks of identity and intimacy may not be fully resolved.

There have been few other attempts to link Erikson's construct of generativity directly with parenting experiences. Snarey, Son, Kuehne, Hauser and Vaillant (1987), again using the core city sample, examined longitudinally the effect of male styles of coping with infertility, and compared these to the men's midlife achievement of generativity. Generativity, defined as "a definite capacity for establishing and guiding the next generation, beyond raising their own children, through their actual sustained responsibility for the growth, well-being, and leadership of other adults", was assessed through clinical interviews as "clearly achieved", "unclear or weak", or "clearly absent" (Snarey et al., 1987, p. 596). Infertile men who subsequently became fathers were found to be more likely to achieve generativity; in fact, infertile adoptive fathers scored the highest on the generativity scale, followed by fertile adoptive fathers, fertile participants in the study, and those who remained childless. Snarey et al. (1987) concluded that, as Erikson had postulated, parenting provides a foundation for but is itself not sufficient to predict successful resolution of generativity at midlife.

Drawing on Vaillant and Milofsky's (1980) conception of generativity as sequential process of care and wisdom, Arnold (1989) sought evidence to link fathers' generativity with their sons' identity formation. Results suggested that fathers' generativity played a positive role in promoting

Eriksonian identity formation in sons as mediated by "cogwheeling", best described as an expanding flexibility on the fathers' part to provide continued guidance in the context of their sons' growing independence. However, reliability and validity data are extremely limited on Arnold's new measures used to assess generativity and cogwheeling as well as on his modified measures of identity and intimacy, and the interdependence of these measures in establishing the results does not provide many external reference points as to their general applicability.

Another line of inquiry has sought to establish the chronological timing of psychosocial changes through the use of retrospective or prospective self-perceptions of change as reported by individuals in early adulthood, middle-age, and old age. One research group (Harris, Ellicott, & Holmes, 1986; Reincke, Holmes, & Harris, 1985), drawing on Levinson's (1978) and Neugarten's (1973) formulations, has focussed more on changing social roles than on specific intrapsychic developmental tasks, and links women's adult transitions to a family cycle framework. Their research identified various transitions in adult women's lives, notably during early adulthood and the child-launching era (Reincke, Holmes & Harris, 1985). In a series of studies, Ryff (Ryff, 1982; Ryff & Heincke, 1983; Ryff & Midgal, 1984) investigated the sequential nature of intimacy, generativity and integrity more specifically within Erikson's theory. In two of these studies, Ryff (Ryff, 1982; Ryff & Midgal, 1984) looked to

various scales on the Jackson Personality Research Form and the Jackson Personality Inventory (dominance, breadth of interest, innovation, social recognition, achievement, and play) to tap into the generativity construct; in all three studies, other scales from these measures were used as controls, on which no systematic change was predicted. Results of the studies using personality scales only (Ryff, 1982; Ryff & Midgal, 1984) were inconclusive in predicting that generative concerns dominate in midlife. Ryff pointed to developmentally insensitive measures and the theoretical complexities of self-perceived change as possible reasons for the lack of clear results. Using the measure of generativity they created, Ryff and Heincke's (1983) results directly linked generativity to middle age for both sexes. In addition to examining self-perceptions of psychosocial change, Ryff and Heincke (1983) sought evidence to establish the co-occurrence of complexity and generativity in middle adulthood. A measure of complexity was developed based on Neugarten's (1968) discussion of executive processes, which involve managing and controlling multiple activities within a complex environment. Complexity was also found to be most salient in middle age. Ryff and Heincke's (1983) results present encouraging evidence in support of the epigenetic structure of Erikson's developmental schema. Confidence in the results of these studies is somewhat constrained, however, by the use of self-perceived change methodology, as self-perceptions of change may not necessarily reflect actual personality change.

Other studies (Van de Water & McAdams, 1989; McAdams & de St. Aubin, in press) have provided mixed results on timing issues. Van de Water and McAdams (1989) found no age-related change in level of generativity in a sample of adults between 22 and 72 years. McAdams and de St. Aubin (in press) observed somewhat higher levels of generativity in an adult sample (mean age=32.7 years) than in a college-age sample, but no support for the association of increasing generativity with age was found on any of three assessment techniques used in a second study reported at the same time. However, the authors caution against overinterpretation of these results, as a rigorous investigation of age-related change was not undertaken. Further studies are clearly needed to address this important issue.

Ryff and Heincke's (1983) study marked one of the first efforts to develop a scale measure specifically to capture generativity vs stagnation. Based on Erikson's formulations, the scale assesses generativity in terms of high and low scorers. A high scorer is defined as one who:

"expresses concern in establishing and guiding the next generation; possesses awareness of responsibilities to children or those younger in age; views self as a norm-bearer and decision maker, shows awareness of leadership role and has a sense of maximal influence capacity"

(Ryff & Heincke, 1983, p. 809).



A low scorer is defined as one who:

"views self as having little impact on others; shows little interest in sharing knowledge or experience with others; reveals excessive self-concern and self-preoccupation; feels no obligation to guide younger generation" (Ryff & Heincke, 1983, p. 809).

Reliability of the 16 item scale was reported as .79 using coefficient alpha. However, validity of the instrument has not been developed beyond the initial study. This has also unfortunately been the case for most of the measures of generativity to date, which have largely relied on global clinical assessments of generativity based on readings of Erikson (Arnold, 1989; McAdams et al., 1986; Snarey et al., 1987; Vaillant & Milofsky, 1980). A second scale measure of generativity recently developed is the Loyola Generativity Scale (LGS) (McAdams & de St. Aubin, in press). In contrast to previous measures, the reliability and validity of this measure is being systematically investigated in a program of research which seeks to elucidate the societal, behavioral, and attitudinal aspects of generativity, as well as the individual's personal narration of generativity as this impacts self-definition (McAdams & de St. Aubin, in press). The 20 item scale obtained good internal reliability in an adult sample of 66 men and 83 women (coefficient alpha=.83)

and in a college sample of 105 women and 60 men (coefficient alpha=.84), and reasonable three week test-retest reliability ( $r=.73$ ) in a separate sample of 23 male and 56 female subjects (McAdams & de St. Aubin, in press). Factor analysis indicated a first factor accounting for 26% of the variance in LGS scores which corresponded to exerting a "Positive Generative Impact" on others; a second factor, "Generative Doubts", reflected the feeling of not being needed by others or being insignificant; and a third factor contained high loadings on three items concerned with passing on knowledge and giving advice (McAdams & de St. Aubin, in press).

Validity studies have taken several directions. One study (McAdams et al., 1989) looked at the relationship between the LGS, the CPI, life satisfaction, and narrations involving generative themes in a sample of 65 men. While attrition (68% of the 204 men initially approached) and methodology (mailed-out test forms) were potentially problematic, an interesting pattern of personality correlates emerged for men on the LGS with the CPI. Dominance ( $r=.52$ ), Sociability ( $r=.55$ ), Social Presence ( $r=.39$ ), Empathy ( $r=.39$ ) and Achievement via Conformance ( $r=.53$ ) were all highly correlated with the LGS ( $p<.001$ ). Capacity for Status ( $r=.37$ ) and Good Impression ( $r=.37$ ) also bore strong relationships to the LGS ( $p<.01$ ). A nonsignificant positive relationship was observed with the Tolerance scale ( $r=.17$ ), and Flexibility was associated negatively, although also nonsignificantly, with the LGS ( $r=-.15$ ). Scores on the LGS were strongly related to

life satisfaction ( $r=.41$ ,  $p<.001$ ), and generative themes of "care/counsel" and "belief in the species" in narrative accounts of peak experiences, creative experiences, and life turning points ( $r=.57$ ,  $p<.001$ ). An interesting finding, somewhat confirmatory of research into male infertility and generativity (Snarey et al., 1988), was that among males especially, having been a parent was positively associated with scores on the LGS.

To obtain a behavioral correlate of the LGS, McAdams and de St. Aubin (in press) developed a generativity behavior checklist and asked subjects to report retrospectively over the past two months the frequency with which they performed both generative acts and acts theoretically unrelated to generativity. Scores on generative acts were strongly related to LGS scores ( $r=.59$ ,  $p<.001$ ), whereas all but one of the theoretically unrelated acts were nonsignificantly associated with the LGS. Autobiographical accounts of peak, nadir, commitment, goal and speculative future episodes were also solicited and scored for generative themes. These scores were similarly strongly associated with both the LGS and the behavior checklist. Results were seen to support convergence between the LGS and these methodologically distinct assessments of generativity.

A number of self-report measures (Darling-Fisher & Kline Leidy, 1988; Domino & Affonso, 1990; Hawley, 1984; Ochse & Plug, 1986) have been recently developed to assess all or most of Erikson's eight psychosocial stages simultaneously.

Generativity subscales from two of these measures (Hawley, 1984; Ochse & Plug, 1986) have been used in studies of generativity. Van de Water and McAdams (1989) found generativity as measured by Ochse & Plug's (1986) scale to be significantly positively correlated to two measures seen to capture Erikson's (1963) notion of generativity as embodying a "belief in the species": "hope for the future" ( $r=.51$ ,  $p<.001$ ) and Ochse & Plug's (1986) trust subscale ( $r=.59$ ,  $p<.001$ ). A moderate correlation ( $r=.32$ ,  $p<.05$ ) was observed between the generativity subscale and open-ended narrative statements about life commitments, as well as with the nurturance scale on the Jackson Personality Research Form ( $r=.31$ ,  $p<.05$ ). Interestingly, the self-absorption subscale of the Narcissistic Personality Inventory (Raskin & Hall, 1979) was not negatively associated with generativity as predicted, but in fact showed a modest positive correlation ( $r=.28$ ,  $p<.05$ ) with Ochse and Plug's generativity subscale.

In their recent study described previously, McAdams and de St. Aubin (in press) administered Hawley's (1984) and Ochse and Plug's (1986) generativity subscales to assess convergence with the LGS. The LGS correlated  $r=.66$  ( $p<.001$ ) with Ochse & Plug's generativity subscale and  $r=.67$  ( $p<.001$ ) with Hawley's generativity subscale, suggesting substantial convergence among the three generativity measures.

While all are still in early stages of investigation, current versions of the multi-stage Erikson measures share a validity problem which limits the usefulness of individual

subscales in inter-stage comparisons. College, adult, and elderly samples have been used to validate all stages, although three studies also recruited mid-teen (Domino & Affonso, 1990; Ochse & Plug, 1986) and preteen (Hawley, 1984) subjects. Consequently, measures of crises postulated as occurring in childhood and infancy have not been developed and validated by samples in the corresponding age ranges.

Progressive increases in inter-stage correlations with age have been suggested as evidence consistent with the notion that early ego resolutions influence subsequent ones (Domino & Affonso, 1990; Hawley, 1984; Ochse & Plug, 1986). However, high inter-stage correlations, such as those found by Darling-Fisher and Kline Leidy (1988) between generativity and identity ( $r=.68$ ) and integrity and trust ( $r=.72$ ) also suggest potential problems of discriminant validity, as individual scales are intended to measure somewhat different constructs, even though assimilation of previous stage gains in later crises is a fundamental tenet of the theory. Ochse and Plug (1986) found a strong general factor to underlie their seven-stage measure in an initial study involving 1859 white and black males and females ranging in age from 15 to 60 years. This general factor, they suggest, represents psychosocial development, and quite possibly identity, in a global sense, consistent with Erikson's integrated system of personality development.

An issue gaining increasing prominence in the adult literature, and clearly of interest in generativity

investigations, is that of potentially different developmental pathways for men and women (Barnet & Baruch, 1978; Gilligan, 1982; Josselson, 1987; Reincke, Holmes & Harris, 1985).

Erikson's model has been criticized as more closely approximating male trajectories, through its sequential ordering of life stages, and its emphasis on autonomy and instrumental pursuits (Gilligan, 1982). Support for this view can be found in research on Erikson's identity and intimacy stages, which suggests that for females the dominant concern is interpersonal tasks, with a consequent merging of identity and intimacy issues, whereas males tend to follow the linear model set out by Erikson (Josselson, 1987; Marcia, 1980; Matteson, 1975; Schiedel & Marcia, 1985). Sex differences in identity and intimacy may be related to early socialization of males and females to seek self-worth in agentic and communal modes of development respectively (Bubowski & Newcomb, 1983; Marcia, Waterman, Matteson, Archer, & Orlofsky, in press).

How developmental differences impact men and women in terms of generativity issues remains unclear at this point. Much of the work relating to generativity has been conducted with respect to male development (Arnold, 1989; Levinson, 1977, 1986; McAdams et al., 1989; Snarey et al., 1987; Vaillant, 1977; Vaillant & Milofsky, 1980). Gilligan (1982) has argued that placing generativity vs stagnation in middle adulthood is too late for women, whose family responsibilities are at that point decreasing as children become independent. Ryff and Heincke (1983) observed no sex differences in their

study of self-perceived change across young, middle, and old aged adults, leading them to contest Gilligan's (1982) proposal that current developmental models are inappropriate for the study of female development. McAdams and de St. Aubin's (in press) study, however, provides some tentative evidence that differing pathways for men and women may extend into generativity. College women's scores on the LGS were similar to those of the older adult males, and varied little from the adult female sample, while college males scored significantly lower than their older adult counterparts.

Apart from timing issues, there may be particular process and content differences for men and women addressing generativity consistent with those found in research into previous psychosocial stages. Several investigators (Kotre, 1986; McAdams et al., 1986; Pita, 1986) have touched on the roles of agency and communion at generativity. Certainly, the adult entering the generativity stage has, potentially, all the tools at his or her disposal to effect a blend of the two. To the extent that this has not occurred, one could perhaps anticipate sex differences in generative tasks to manifest, at least partially, along agentic and communal lines.

### The Status Approach to Generativity

Aspects of current theoretical discussions of generativity are reflected and extended in a model that seeks to delineate broad styles of resolving the issues of this stage from within Erikson's framework, consistent with

Marcia's (1966) and Orlofsky, Marcia and Lesser's (1973) status typology research into Eriksonian identity and intimacy. While most measures have focussed on operationalizing generativity along a continuum, this process-oriented approach identifies criteria by which individuals arrive at and potentially move between styles of resolution. Although some statuses imply a healthier resolution of the stage than others in an Eriksonian sense, the generativity outcomes proposed here are not strictly linearly ordered. They are, rather, individual modes of resolution of the stage, in which elements of both generativity and stagnation appear to varying degrees and in different ways.

A semi-structured interview and scoring manual were developed in an initial study (Bradley, 1988) through interviews of 18 men and 19 women between 45-55 years of age. These ages were selected as representing a time at which, according to psychosocial theory, generativity issues should largely be resolved, with final stage outcomes perhaps more readily, and more clearly, observable. Younger individuals could still be finalizing their transitional process from previous stages, while older individuals might be more focussed on the subsequent stage, integrity vs despair. Five generativity statuses, or prototypic styles, were described and differentiated on the basis of two criteria as they relate to the self and others: vital involvement and tolerance. Vital involvement reflects the degree of active concern for the growth of oneself and others, a sense of responsibility



for sharing skills and knowledge, and the ability to follow through with commitments. This generativity criterion is consistent with Erikson's notion that "...care is the expression of a vital sympathetic trend with a high instinctual energy at its disposal..." (Erikson, 1982, p. 68), through which adults participate "in the establishment, the guidance, and the enrichment of the living generation and the world it inherits" (Erikson, 1974, p. 123). Tolerance reflects the scope of one's caregiving activity, in terms of who or what is to be included or excluded. Low levels of tolerance as defined here reflect Erikson's concept of rejectivity, which he considered the antithesis of care, as an "unwillingness to include specific persons or groups in one's generative concern - one does not care to care for them" (Erikson, 1982, p. 68). Tolerance is also represented by the degree to which one is authoritative, in the sense of knowledgeable and experienced, as opposed to authoritarian, or dogmatic. This aspect of tolerance coincides with Erikson's concept of "authoritism" described previously (Erikson, 1982). Combinations of these criteria yield the following generativity statuses, and are presented in Figure 1.

*Generative* individuals are characterized by high vital involvement: in the growth of young people, in the area of work chosen, and in the future society which will be left behind. The *Generative* individual is conscious of being a guide to others, and feels the need to impart accumulated knowledge and experience, while remaining tolerant of other

Figure 1

Vital Involvement/Tolerance and Generativity Status

|                  | VITAL INVOLVEMENT     |        | TOLERANCE                 |        |
|------------------|-----------------------|--------|---------------------------|--------|
|                  | Self                  | Others | Self                      | Others |
| Generative       | High                  | High   | High                      | High   |
| Pseudogenerative |                       |        |                           |        |
| Agentic          | High                  | Low    | High                      | Low    |
| Pseudogenerative |                       |        |                           |        |
| Communal         | Low                   | High   | Low                       | High   |
| Conventional     | High<br>(or moderate) | High   | Low<br>(or moderate)      | Low    |
| Stagnant         | Low                   | Low    | Low<br>(or laissez-faire) | Low    |

ways of being and other traditions. *Generative* individuals lead in such a way as to teach the next generation how to lead in its own style, yet imbue it with the legacy of their achievements and views. Two styles are grouped under the general heading of *Pseudogenerative*: *Agentic* and *Communal*. For the *Pseudogenerative* individual, investment in other things or people is highly related to personal needs or goals, which makes it difficult to truly nurture the independent growth of the people or organizations around them. Those with an *Agentic* orientation are highly involved in and tolerant of the self, but not others. Absorbed with their own personal or professional goals, they tend to exclude from their concern people not involved in a common project. Not so for those with a *Communal* orientation, who have a high investment in others, often to the extent that personal desires and ambitions appear secondary. However, their strong need to be needed by others may result in their promotion of dependent relationships. *Conventional* individuals, while high in vital involvement for both self and others, are generally low in tolerance across the board. Traditional in outlook, their concern is primarily for "their own kind". They feel that young people need firm guidance, and they resist deviations from established values, culture or lifestyle. While truly concerned with others as individuals, *Conventional* individuals are restricted in the world view they can impart to those they guide. *Stagnant* individuals are characterized by low vital involvement and, generally, low tolerance with respect to

others. Although higher tolerance may be exhibited, this will be in the form of a "laissez-faire" attitude rather than as a thought-out position. Inactivated in generative concerns, the *Stagnant* individual seems truly stuck; there is a feeling of little movement in, or giving to, the world, and little satisfaction with oneself.

In this model, the terms agentic and communal are used to describe broadly instrumental or interpersonal orientations to generative issues. Integration of these aspects of functioning is implied in the *Generative* resolution, whereas an imbalanced emphasis on one or the other is present in the *Pseudogenerative-Agentic* and *Communal* prototypes. This view of agency and communion shares with Bakan's (1966) and Kotre's (1984) formulations the notion that overreliance on agency is maladaptive. However, it also agrees with White (1979) that not only can agency be perceived as a positive quality, but excessive communality can be equally as maladaptive as excessive agency.

The *Pseudogenerative-Agentic* style most closely resembles the career consolidation stage of Vaillant (Vaillant, 1977; Vaillant & Milofsky, 1980), and the "climbing the ladder" phase of male adult development described by Levinson (Levinson, 1986). It differs, however, in critical ways. First, unlike Vaillant and Milofsky's (1980) conceptualization, self-absorption is not perceived as polar to *Pseudogenerative-Agentic*, but rather as a fundamental component thereof. Second, as a pervasive generativity style,

it is apparent not only in the workplace, but also in family relations, in the community, and in areas of personal concern. Third, it can represent a final resolution of the stage, one that remains distinct from stagnation. Similarly, the *Conventional* status bears some resemblance to Vaillant's post-generative stage of keepers of the meaning vs rigidity, because of the low tolerance characteristic of this prototype. However, *Conventional* is postulated as a legitimate generativity resolution, with probable antecedents in earlier stages, rather than a subsequent stage in which the individual's desire to pass on cultural values may be compromised by a calcification of intellectual functioning due to the aging process. Finally, the conceptualization of these, as well as the remaining generativity statuses, in terms of specific psychological variables provides a consistent framework in which to examine and compare the salience of these issues in managing generative tasks for both men and women.

One other way in which this approach differs from previous theoretical discussions and empirical investigations into generativity vs stagnation lies in its emphasis on integrating directly into the model the basic antipathy associated with this stage. While most researchers have focussed on exploring and elucidating aspects of generativity related to Erikson's conception of the ego strength care, such as creating a legacy (McAdams et al., 1986) and belief in the species (Van de Water & McAdams, 1989), rejectivity and

authoritism have received little theoretical or research attention. A notable exception is Browning's (1975) discussion of Erikson's masterful synthesis of the "regressive and the progressive, the low and the high...into a closer dialectical relationship" (Browning, 1975, p. 147), and his analysis of pseudospeciation and autocracy in the context of contemporary pluralism and technological specialization. Generative man, he states, "refuses to regard the specializations of others as mere chaos, evil or threat" (Browning, 1975, p. 208), but rather acknowledges and respects their separate merit while pursuing his own particular path. In the generativity status model, care for self and others is juxtaposed with rejectivity for the self and others through various combinations of vital involvement and tolerance, with theoretical consequences on intrapsychic, behavioral and societal levels.

In the initial approach to exploring the validity of the new generativity statuses, the primary purpose of the study was to define the theoretical components of generativity vs stagnation and to construct an objective status measure. An initial scoring manual was developed based on Erikson's discussions of generativity and interviews of 3 women and 2 men.

Secondarily, assessment of inter-scorer reliability and a limited attempt at establishing convergent validity using a self-report linear measure of generativity vs stagnation were undertaken. Two waves of 8 men and 8 women were interviewed

and rated on the Generativity Status Measure. Discussion of consensual and divergent rating decisions after the first set of interviews led to further elaboration of the scoring manual to provide clearer guidelines as to status boundaries. Although the reliability figures obtained on the second set of subjects were within an acceptable range, after discussion and clear consensus on additional ratings was obtained ( $\kappa=.81$ , or 88%), the pre-consensus figures ( $\kappa=.54$ , or 69%) indicated a need for further refinement of scoring procedures, and possibly more detailed theoretical conceptualizations of the statuses.

Convergent validity in the initial study was assessed using Ryff and Heincke's (1983) linear generativity scale. No significant differences between the statuses on the linear measure were observed in analysis of variance operations, possibly because of the small sample size on which firm consensus for status assignment was reached ( $n=26$ ), and potential differences in the way the two measures interpret Erikson's generativity vs stagnation construct. Examination of the items on Ryff and Heincke's (1983) generativity scale suggested a level of directiveness that may compromise the tolerance criterion of the status approach. Two examples of such items are: "My opinions are presently very influential in guiding the choices of others", and "Adults should help younger people when it comes to making important decisions about work and family". Endorsement of the items would result in a high score on Ryff and Heincke's (1983) scale, but the

low tolerance which they may represent in the individual could preclude a *Generative* status categorization. Statuses other than *Generative* were therefore collapsed on the basis of tolerance with respect to others criterion. This resulted in three categories: *Generative*; *Pseudogenerative-Agentive* and *Conventional*, representing low or moderate tolerance; and *Pseudogenerative-Communal* and *Stagnant*, representing high or laissez-faire tolerance. The two individuals on which a consensus of *Stagnant* was obtained were included in the high tolerance group as they exhibited primarily a laissez-faire tolerance in their interview responses. Scores on Ryff and Heincke's (1983) measure were dichotomized into high and low, and both generativity measures were treated as nominal data. It was hypothesized that the "low tolerance for others" statuses would score high on Ryff and Heincke's measure, and the "high tolerance for others" statuses would score low on the convergent measure. Although the small sample size and resulting low expected cell counts precluded firm statements about the convergence of these two measures, the chi square analysis approached significance ( $p < .065$ ). The *Generative* status, and the combined *Pseudogenerative-Agentive* and *Conventional* category, tended to score high on the dichotomized scale measure, while the *Pseudogenerative-Communal* and *Stagnant* combination tended to score low on the measure. These data, then, provided some limited support for the hypothesis that the measures may differ in their



theoretical interpretation of Erikson's generativity vs stagnation construct.

Women were generally more difficult to score than men. In fact, women quite often did not seem to be working on generativity issues in this initial generativity status study. Many seemed to be dealing with identity issues, although the study did not provide any direct assessment of identity. This observation is, however, in keeping with previously discussed literature on potential differences in male and female developmental trajectories. Increasing social support for women to develop an independent identity, coincident with the natural close of the child-rearing years for the age group studied, possibly made a return to identity issues more of an option or necessity for the women who participated.

### The Present Study

The present study sought to further develop and investigate the proposed generativity statuses in several ways. One goal was enhanced inter-rater reliability. In the initial generativity status study, two independent raters classified participants according to the single status profile that seemed to best typify their resolution of this life stage. Difficulties in establishing firm inter-rater reliability in that study frequently seemed attributable to differences in emphasis rather than to completely divergent assessments of the individual. For instance, one rater may have assessed an individual as "Conventional, but with strong

*Agentic leanings*", while the second rater described that same individual as "*Agentic, but with strong Conventional leanings*". Reliance on a single global status assessment for the investigation of reliability and validity may result in a loss of valuable information about similarities in assessment, as well as about the individual's particular style of generativity. The present study, therefore, adopted a revised method of scoring generativity statuses that departs from traditional status approaches to other psychosocial stages (Marcia, 1966; Orlofsky, Marcia & Lesser, 1973), but which is consistent with current research into attachment styles (Bartholomew, 1991). These revisions attempt not only to reflect inter-rater scoring agreements and disagreements more accurately, but also seek to capture more fully the complexities of individual resolutions of this life stage. Statuses continue to be conceived of as prototypes of resolution of the stage, with individuals manifesting most strongly one or another of these resolution profiles. However, individuals can reasonably be expected to differ in the extent to which they exemplify a particular resolution, and may exhibit to varying degrees characteristics associated with other status prototypes. One way to record this diversity is to use multidimensional scalings to assess each individual on all five generativity statuses simultaneously, so that a generativity profile is generated which explicitly states the strength of an individual's affiliation with each status resolution. Under this scoring procedure, the highest

overall dimensional rating becomes the status classification for a particular individual; this and the dimensional ratings can then be used in further analyses. In the present study, both the traditional status classifications and the new dimensional ratings were implemented, so that the two procedures could be compared in reliability and validity analyses. Categorical status ratings were analyzed for inter-rater reliability using pairwise kappa coefficients, consistent with previous generativity research. Since averaging reasonably consistent ratings across several judges is known to enhance reliability, with concomitant gains in validity (Horowitz, Inouye, & Siegelman, 1979; Murphy & Davidshofer, 1991), generativity scale scores were also averaged across raters as a means of arriving at status classifications and dimension ratings. Alpha coefficients and standard error of measurement for each dimension across raters were calculated to determine how reliably these ratings could be combined for use in further analyses.

While the study of sex differences in the timing and linearity of adult psychosocial tasks is beyond the scope of this study, the relevance of gender issues to developmental models makes gender distribution within the proposed generativity prototypes, and their relationship to validity measures, important areas of consideration. No sex differences were anticipated for the *Generative*, *Conventional* and *Stagnant* status classifications or dimension scores. Sex differences in classification distribution and dimension

scores were anticipated for the *Pseudogenerative-Agentive* and *Pseudogenerative-Communal* prototypes, for reasons discussed earlier. The former was expected to appear as a more "male" orientation, and the latter as a more "female" orientation. Analyses of gender differences on the status measure were undertaken using both categorical and dimensional ratings, and gender effects were monitored in subsequent analyses.

A second aim of this study was to establish evidence for convergent validity of the proposed statuses, as part of the process of determining construct validity for these and for the stage model itself. McAdams and de St. Aubin's (in press) LGS, and Ochse and Plug's (1986) generativity subscale were selected to assess the degree of convergence between the status measure and other instruments designed to measure generativity. The pattern of correlations between the LGS and the CPI, notably the strong positive relationship with Dominance and Achievement via Conformance, as well as the weak relationships with Tolerance and Flexibility, suggest possible conceptual divergences, similar to those hypothesized for Ryff and Heincke's (1983) scale, between the status prototype measure and McAdams et al.'s (1989) new scale. However, McAdams et al.'s (1989) array of items appear, at face value, much less directive than those of Ryff and Heincke (1983), and this, together with McAdams' programmatic approach to the study of generativity vs stagnation, recommended the LGS for use in the present study. Ochse and Plug's (1986) generativity subscale, in addition to obtaining strong

convergence with the LGS (McAdams & de St. Aubin, in press), has begun to accrue some construct validity through positive correlations with nurturance, hope for the future, and life commitments in narrative scripts (Van de Water & McAdams, 1989). Internal consistency of the generativity subscale in Ochse and Plug's (1986) study was reasonably strong in the white sample (coefficient alpha=.76,  $N=1475$ ), although somewhat lower in the black sample (coefficient alpha=.68,  $N=384$ ).

Both categorical status classifications and overall multidimensional ratings were used to assess convergence between the status prototype measure and the two linear generativity measures. Specifically, individuals classified under the status measure as *Generative* were predicted to score significantly higher on the LGS and Ochse and Plug's generativity subscale than those classified as *Stagnant*; these prototypes were expected to obtain the highest and lowest scores respectively on the scales. Intermediate scores for *Pseudogenerative-Agentive*, *Pseudogenerative-Communal* and *Conventional* statuses would be consistent with the conceptualization of these statuses as somewhat lacking in generativity. However, given the potential theoretical differences between the status measure and alternate linear measures of generativity, higher scores on the LGS and the Ochse and Plug (1983) generativity subscale than those obtained by *Generative* were considered entirely possible for the *Pseudogenerative-Agentive* and *Conventional* statuses.

Similarly, strong positive correlations between *Generative* dimension ratings and the two generativity scales were hypothesized, as well as strong negative correlations between these measures and *Stagnant* dimension ratings; the correlations were expected to differ significantly from one another. A correlational pattern similar to that predicted for status mean scores was anticipated between the remaining generativity status dimension ratings and generativity scales.

Ochse and Plug (1983) suggested that a strong general factor underlying their scale measure of the first seven of Erikson's stage constructs could represent psychosocial development in a global sense. Convergence between the generativity status measure and Ochse and Plug's (1983) overall scale would, therefore, serve to link the status prototype resolutions to overall psychosocial adjustment within an Eriksonian framework.

Internal consistency of the total scale was high (coefficient alpha=.91 for the combined black and white samples) (Ochse & Plug, 1986). In the present study, the subscales of the Ochse and Plug Erikson Scale (OPES), excluding the generativity subscale, were collapsed into a single scale score for use in analyses. Status prototype classifications and dimension ratings were expected to perform similarly on this measure of overall psychosocial adjustment to predictions for the LGS and OPES generativity subscale.

Convergence was also sought using an established personality inventory. Costa and McCrae (1980) have argued

persuasively for the use of validated trait model personality inventories in research into adult development. The NEO (Costa & McCrae, 1985) is a psychometrically sophisticated instrument that assesses five domains of personality:

Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness. Six facet scales, comprised of 8 items each, have also been developed as sub-components for each of the Neuroticism, Extraversion, and Openness to Experience domains. When combined, these facet scales produce the corresponding overall domain score.

The Openness to Experience domain scale and the Values facet scale were selected as measures to examine personality characteristics that could reasonably be associated with the generativity status prototypes, and to assist in determining possible divergences in theoretical emphasis between the prototype measure described here and linear measures of generativity. The Openness to Experience domain scale seeks to assess individuals' "appreciation of experience for its own sake; toleration for and exploration of the unfamiliar" (Costa & McCrae, 1985, p. 2). Openness to Experience has been shown to correlate moderately with ego level as measured by Washington Sentence Completion Test, and has obtained consistent negative correlations with the Traditional Family Ideology Scale (Costa & McCrae, 1985). Strong relationships between Openness to Experience and artistic and investigative vocational interests have also been found (Costa & McCrae, 1985).

The Openness to Experience domain scale is comprised of the facet scales Fantasy, Aesthetics, Feelings, Actions, Ideas and Values. Fantasy taps into an imaginative vs practically based thinking style. Aesthetics measures appreciation of art and beauty, and Feelings captures emotional responsiveness and empathic tendencies. Actions juxtaposes novelty-seeking with preference to strict routines, while Ideas differentiates between analytical, theoretically-oriented and pragmatic approaches to life.

High scorers on the Values facet scale are described as "broad-minded, tolerant, non-conforming, open-minded"; low scorers are described as "dogmatic, conforming, narrow-minded, conservative" (Costa & McCrae, 1985, p. 2). Costa and McCrae (1985) suggest that individuals high on Openness to Values are more disposed to reexamine social, political, and religious values. Closed individuals on this facet scale are more apt to accept authority and uphold tradition, and therefore appear more generally conservative.

Internal consistency of the domain scale is high (coefficient alpha=.86 for men and .88 for women), although it is somewhat reduced for the Values facet scale (coefficient alpha=.67 for men and .73 for women) (Costa & McCrae, 1985). Six month test-retest reliability is good ( $r=.86$ , domain scale;  $r=.79$ , facet scale) (Costa & McCrae, 1985) as is test-retest reliability over the much longer period of 6 years ( $r=.83$ , domain scale;  $r=.71$ , facet scale) (Costa & McCrae, 1989).



Generativity statuses high on the tolerance criterion were expected to score higher on the Openness to Experience domain scale, and particularly on the Values facet scale, than statuses low in tolerance, especially those low in tolerance for others. Specifically, statuses *Pseudogenerative-Agentive* and *Conventional* were anticipated to score highly on the LGS and the Ochse and Plug (1983) generativity subscale, while scoring relatively low on the Openness to Experience overall domain and Values facet scale. *Stagnant*, also low in tolerance, may generally be predicted to obtain low scores on the Values facet scale and overall Openness; however, the "laissez-faire" tolerance sometimes witnessed in individuals of this status precluded firm predictions regarding its relationship to Openness to Experience. Consistency in results using categorical classifications and dimensional ratings was expected.

## CHAPTER III

## METHOD

Participants

The sample consisted of 103 adults (52 men and 51 women) ranging in age from 42 to 64 years ( $M= 49.22$ ,  $SD=3.97$ ), ages where generativity is presumed to be readily observable. The men's mean age was similar to that of the women ( $M=48.68$ ,  $SD=3.85$  and  $M=49.76$ ,  $SD=4.05$  respectively). Of these participants, inaudibility of two taped interviews and non-return of one written protocol resulted in the elimination of three subjects, for a final total of 100 participants (50 men and 50 women). All of the participants were volunteers who took part in the study between June 1991 and January 1992 and were not paid for their participation. All were told that the study concerned the "challenges that face men and women in middle adulthood", and that they would be asked about their "values and activities, particularly in the areas of work, social issues, family relations, and personal achievements".

Participants were recruited primarily through a wide distribution of posters in various agencies in the British Columbia Lower Mainland, including: 1) employee bulletin boards in a number of small companies, at a municipal courthouse, a local college, a large utilities company, a transit authority, and a federal government office; 2) university bulletin boards and newspapers; 3) a male adult

hockey league; 4) community centres; 5) apartment building bulletin boards; 6) the Vancouver Mature Women's Network; and 7) chapters of a local sorority. In addition, the investigator personally solicited volunteers at four divisions of Toastmasters International, a public speaking organization. No more than 13 participants were obtained from any one recruitment source. The single source that generated the most participants (Simon Fraser University) provided volunteers from notices at both a suburban and a downtown campus, as well as from the university newspaper and in-class solicitations. All participants were asked to "chain" and bring up to two more individuals, other than spouse, into the study. Twenty participants complied and chained to a total of 23 individuals. In only 6 cases were those chained to judged by the investigator to be of the same status resolution as their friend or colleague; therefore, this recruiting method did not appear to bias the sample towards any particular status representation. None of the participants were known to the researcher prior to the study.

The sample was universally caucasian with the exception of one Asian participant. Of the total, 47 participants indicated that they were married; 44 indicated that they were separated, divorced or widowed, and 9 indicated that they were single and had never been married. Although nonsignificant, chi square analysis revealed a trend (chi square=3.25,  $p < .07$ ) towards more unmarried women than unmarried men ( $n=31$  and  $n=22$  respectively). Seventeen participants had obtained high

school education or less (5 men, 17 women); 63 had college or university undergraduate education (29 men, 34 women); and 20 had graduate training in various stages of completion (16 men, 4 women). Differences in education level between men and women were highly significant (chi square=10.48,  $p < .005$ ), with women more concentrated in the lower and middle education levels. Nearly half of the participants were employed in traditionally blue-collar occupations ( $n=42$ ; 11 men and 31 women) such as trades, clerical, transit operator, cashier; 36 (23 men and 13 women) were employed in white-collar occupations, including lawyer, nurse, engineer, professor, and business management. Owner/operator entrepreneurs and commissioned salespeople numbered 15 (12 men and 3 women), and 7 participants were unemployed, retired or full-time students (4 men and 3 women). Significant sex differences on occupational levels (chi square=17.84,  $p < .0005$ ) resulted in a preponderance of women in blue collar occupations, and higher numbers of men in white collar and sales/entrepreneurial employment. Eighty-five percent (43 men, 42 women) had children of their own or by marriage; the average number of children for these participants was 2.1, and the average across the entire sample was 1.8. Age of children ranged from 7 to 34 ( $M=22.15$ ,  $SD=6.12$ ).

### Measures

Generativity Status Measure. Generativity status, or prototypic resolution of the issues of generativity vs

stagnation, was determined by means of a semi-structured interview of approximately one hour in duration. Levels of vital involvement and tolerance, the defining criteria for the status prototypes, are implicitly assessed through categorical classification and dimensional scoring of the various prototypes, as each embodies a particular combination of these two defining criteria. The *Generative* status is characterized by high vital involvement and tolerance, and represents the most positive psychosocial outcome. The *Pseudogenerative-Agentive* prototype is high in vital involvement and tolerance for self but not for others, while the *Pseudogenerative-Communal* status is high in vital involvement and tolerance for others but not for self. The *Conventional* status, high in vital involvement for self and others, is low to moderate in tolerance across the board. *Stagnant* reflects the poorest psychosocial outcome, and is low in vital involvement and tolerance generally, although laissez-faire tolerance is sometimes present. Examples of questions tapping vital involvement are: "Do you feel you've accomplished or are on the way to accomplishing your career goals?"; "How do you feel you have influenced your children's development?"; and "Are you involved in community or volunteer work?". Examples of questions tapping tolerance are: "How do you react when someone questions your authority?"; "What do you think young people today need?"; and "How do you feel about the direction your children have chosen?". Probing questions may additionally be asked in order to obtain a scorable response,

and a certain flexibility is adopted so that the instrument is not inappropriately biased. For instance, if an individual does not have children, questions exploring the participant's relationship to other young people are asked.

In each of four targetted areas of activity (work, community, family, personal), the participants were assessed on the five generativity statuses using a 9-point Likert scale. Participants were then given an overall dimensional rating on each status and an overall categorical status rating for use in subsequent analyses. The overall dimensional and categorical ratings are intended to reflect global assessment and do not necessarily correspond to the arithmetic average of ratings across the four areas of activity. The interview and details of scoring decision rules are contained in Appendix A.

Loyola Generativity Scale. The Loyola Generativity Scale (LGS) is a 20-item questionnaire (Appendix B) developed by McAdams and de St. Aubin (in press), and was used to determine generativity self-rating. Reliabilities of .83 and .84 (coefficient alpha) were reported in two different samples using this scale ( $N=149$  and  $N=160$ ), and three week test-retest reliability in a separate sample was acceptable ( $r=.73$ ,  $N=79$ ) (McAdams & de St. Aubin, in press).

Participants were asked to indicate on a 4-point Likert scale the extent to which they agreed or disagreed with each item. High scores indicate greater success with the tasks of generativity vs stagnation. Examples of questions from the scale are: "I try to pass along the knowledge I have gained

through my experiences"; "Others would say I have made unique contributions to society"; and "I have a responsibility to improve the neighborhood in which I live". Scoring is reversed on six items to control for response set. Examples of these are: "I do not volunteer to work for a charity"; and "In general, my actions do not have a positive effect on others".

Ochse and Plug Erikson Scale. This 93-item questionnaire (OPES) developed by Ochse and Plug (1986) is comprised of subscales designed to assess Erikson's first seven psychosocial stages (Appendix C) and a scale to assess social desirability. Internal consistency of the total Erikson scale was high in an initial study involving black and white subjects (coefficient alpha=.91,  $N=1859$ ). Ochse and Plug (1986) suggested that a strong general factor representing psychosocial development in a general sense underlies their measure of Erikson's constructs. Therefore, all Erikson subscales excluding the generativity subscale were collapsed and combined into an OPES Total scale score ( $N=76$  items) for the purposes of this study, as a measure of overall psychosocial adjustment. The generativity subscale ( $N=10$  items) was also used in analyses as a second measure of generativity self-rating. Internal consistency of this subscale in two separate samples using coefficient alpha was .76 ( $N=1475$ ) and .68 ( $N=384$ ). High scores indicate increasing mastery of psychosocial tasks (OPES Total scale) or generativity issues (OPES generativity subscale).

Participants were instructed to indicate on a 4-point Likert scale the degree to which they agreed or disagreed with each item. Examples of items from the generativity subscale are: "I help people to improve themselves"; "I enjoy caring for young children"; and "I have a good influence on people". Reverse scoring is used for half the items. Examples of these items are: "I take great care of myself"; "Young people forget what one has done for them"; and "I feel my life is being wasted". Examples of items from subscales designed to measure other stage issues are: "I feel the world's major problems can be solved" (trust vs mistrust); "After I have made a decision I feel I have made a mistake" (autonomy vs shame, doubt; reverse scoring); "I am prepared to take a risk to get what I want" (initiative vs guilt); "I lose interest in something and leave it unfinished" (industry vs inferiority; reverse scoring); "I feel proud to be the sort of person I am" (identity vs identity diffusion); and "I feel nobody really cares about me" (intimacy vs isolation; reverse scoring).

The social desirability scale ( $N=17$  items) built into the OPES was administered in order to preserve the integrity of the scale, but was not included in analyses. Validity data on this scale, developed simultaneously with the Erikson subscales, has not been established, and therefore it is unclear whether items truly represent socially desirable responses. Moreover, the scale was shown to correlate rather strongly with the generativity subscale in two different



samples ( $r=.38$ ,  $N=1475$ ; and  $r=.36$ ;  $N=384$ ) in Ochse and Plug's (1986) study.

NEO-PI. The NEO-PI is a 180-item inventory which offers domain scales for Agreeableness and Conscientiousness, and domain and facet scales for Neuroticism, Extraversion, and Openness to Experience. Each facet scale is comprised of 8 items, and domain scales in the areas of Neuroticism, Extraversion, and Openness to Experience are produced by adding scores across 6 related facet scales. The present study examined scores obtained on the Openness to Experience domain ( $N=48$  items) and the Values facet scale (Appendix D). Openness to Experience describes an individual's "appreciation of experience for its own sake; toleration for and exploration of the unfamiliar" (Costa & McCrae, 1985, p. 2), with high scores representing more open responses. Examples of items from this scale are: "I don't like to waste my time daydreaming" (reverse scoring); "I am intrigued by the patterns I find in art and nature"; and "I often enjoy playing with theories or abstract ideas". High scorers on the Values facet scale, which is a component of the domain scale, are described by Costa and McCrae (1985) as "broad-minded, tolerant, non-conforming, open-minded"; while low scorers on this facet scale are "dogmatic, conforming, narrow-minded, conservative" (Costa & McCrae, 1985, p. 2). Examples of items from this scale are: "I believe letting students hear controversial speakers can only confuse and mislead them"

(reverse scoring); and "I consider myself broad-minded and tolerant of other people's lifestyles".

Internal consistency of the domain scale is high (coefficient alpha=.86 for men and .88 for women), although it is somewhat reduced for the Values facet scale (coefficient alpha=.67 for men and .73 for women) (Costa & McCrae, 1985). Six month test-retest reliability is good ( $r$ =.86, domain scale;  $r$ =.79, facet scale).

The NEO-PI was administered in its entirety. Participants were asked to indicate on a 5-point Likert scale the extent to which they agreed or disagreed with each item. The facet and domain scales relating to Neuroticism, Extraversion, Agreeableness, and Conscientiousness were scored for use in a separate study.

Washington Sentence Completion Test The 18-item short version of this measure of ego development (Loevinger, 1985) was administered for use in a separate study.

### Procedure

Interview and scale administration. Measures were administered in the order presented above. The Generativity Status Measure was preceded by a brief demographic form indicating age, sex, marital status, educational background, occupation, and the number and age of children. Interviewing was conducted in locations convenient to participants, which included their homes, offices, Simon Fraser University, and restaurants. Self-report measures were left with participants

to complete following the interview, and a stamped, self-addressed envelope was provided for their return to the investigator. All participants were instructed to complete self-report scales in the designated order, preferably within the week immediately following the interview. Actual rate of return ranged from two days to two months. Participants whose protocols had not been received after a two week period following the interview ( $n=20$ ) were contacted by the researcher; in most cases, this reminder resulted in prompt completion and return of the measures.

Interview scoring procedure. Generativity Status Interviews were audiotaped for scoring purposes. All interviews were conducted by the author, and all were rated prior to the scoring of written measures. Two senior undergraduates in the Psychology Department at Simon Fraser University were trained in use of the Generativity Status Measure and served as independent raters. Training took place over a three month period during which 20 tapes from the author's previous generativity study were reviewed. Decision rules on status and dimensional scoring were discussed at regular meetings. Trainees were also provided with the scoring manual contained in Appendix A, and various readings on Erikson's constructs. These raters were then assigned to provide status classifications and dimensional scores for alternate male and female participants, while the author rated all participants interviewed. Meetings were held during the

scoring process and clarifications on rating decision rules provided as necessary.

Self-report scoring procedure. One protocol was lost in the mail and the participant filled out a second set of measures within two months of the Generativity Status Measure interview. Although test-retest reliability of the OPES generativity subscale is as yet undetermined, three week test-retest reliability of the LGS was good ( $r=.73$ ), and generativity level is not expected to vary greatly in a limited time-span. Therefore, these data were included in subsequent analyses. Since test-retest reliability of the NEO has been established (range=.66-.92 on facet and domain scales; six months elapsed time), readministering this test was considered reasonable. In one other case, a participant failed to complete two consecutive pages of the written measures, and scale scores for the NEO Openness to experience dimension could not be computed. In all other instances where items on the NEO were missing, participants were assigned the middle score of the 5-point scale (value=2). No more than two items were missed on any one NEO scale, and no more than three scales were affected for any individual participant. Missing items on the LGS, OPES Generativity subscale, and OPES Total scales were assigned the value of the individual's modal score for that scale. No more than two items were missed on the LGS or the OPES Generativity subscale and no more than four items were affected on the OPES Total scale for any individual participant. With the exception of the above-mentioned

individual for whom the Openness to Experience dimension could not be computed, a total of 31 participants had either one or two missing items across the entire written protocol; 8 had a total of between three and eight blank items. Items on which responses were endorsed between the available options ( $n=19$  across all participants) were alternately assigned the higher or the lower of the values indicated.

## CHAPTER IV

## RESULTS

Inter-Rater Reliability

Characteristics of interview ratings. From the interview rating procedure, the author (Rater 1) classified 23 (23%) participants as *Generative*, 12 (12%) as *Pseudogenerative-Agentic*, 19 (19%) as *Pseudogenerative-Communal*, 34 (34%) as *Conventional*, and 12 (12%) as *Stagnant*. One of the trained raters (Rater 2) rated 49 participants and classified 12 (25%) as *Generative*, 7 (14%) as *Pseudogenerative-Agentic*, 11 (22%) as *Pseudogenerative-Communal*, 12 (25%) as *Conventional*, and 7 (14%) as *Stagnant*. The remaining scorer (Rater 3) rated 37 subjects and classified 5 (14%) as *Generative*, 9 (24%) as *Pseudogenerative-Agentic*, 10 (27%) as *Pseudogenerative-Communal*, 9 (24%) as *Conventional*, and 4 (11%) as *Stagnant*. A total of 86 participants were rated twice on the Generativity Status Measure.

For all raters, the highest dimensional rating corresponded to the overall categorical status rating, excluding cases where two dimensions were tied for the highest score. In these cases, ( $n=4$ , Rater 1;  $n=1$ , Rater 2;  $n=1$ , Rater 3), raters uniformly selected one of the top scoring dimensions as a final status classification. Dimension scores between Raters 1 and 2 and between Raters 1 and 3 were combined to yield average scores, and the highest average

score was used to derive status classifications for each individual. Average dimension ratings yielded clear status classifications in 42 cases for Rater 1 and Rater 2; in 7 cases, ties for highest score on two ( $n=6$ ) or three ( $n=1$ ) dimensions precluded final status assignment from this method. For Rater 1 and Rater 3 combined scores, similar ties numbered 3 (ties on two dimensions=2; ties on three dimensions=1).

Table 1 contains means, standard deviations, and ranges for generativity dimension scores assigned by each rater, and for scores averaged across Raters 1 and 2, and across Raters 1 and 3. Distributions on *Pseudogenerative-Agentive* and *Stagnant*, and to a lesser degree, *Pseudogenerative-Communal*, were strongly positively skewed, as suggested by the low mean scores for these dimensions. However, the range of scores indicates that raters utilized the full scale for each dimension in making relative assessments of individuals, and that when scores were averaged, a broad range of values was retained. Possible reasons for the lack of a more even distribution of scores on the *Pseudogenerative-Agentive* and *Stagnant* dimensions is considered in the Discussion section.

Table 2 shows correlations between dimensions for each rater's scores and for average scores. Rating patterns were largely parallel across scorers, with correlations between *Pseudogenerative-Communal* and *Pseudogenerative-Agentive* being the most notable exception. Dimensional ratings bore inter-relationships generally in line with the theoretical conceptualization of the prototypes.

Table 1

Means, Standard Deviations and Ranges for Generativity  
Dimension Scores

| Generativity<br>Dimension | Statistic | Raters             |                   |                   |                                 |                                 |
|---------------------------|-----------|--------------------|-------------------|-------------------|---------------------------------|---------------------------------|
|                           |           | Rater 1<br>(N=100) | Rater 2<br>(N=49) | Rater 3<br>(N=37) | Rater 1/2<br>Averages<br>(N=49) | Rater 1/3<br>Averages<br>(N=37) |
| GEN                       | Mean      | 3.92               | 3.14              | 3.24              | 3.83                            | 3.47                            |
|                           | SD        | 1.95               | 2.07              | 1.82              | 1.82                            | 1.61                            |
|                           | Range     | 1.0 - 8.0          | 1.0 - 9.0         | 1.0 - 7.0         | 1.0 - 8.5                       | 1.0 - 7.0                       |
| PGA                       | Mean      | 2.81               | 2.43              | 2.78              | 2.59                            | 2.91                            |
|                           | SD        | 1.80               | 2.12              | 2.51              | 1.77                            | 1.93                            |
|                           | Range     | 1.0 - 8.0          | 1.0 - 8.0         | 1.0 - 8.0         | 1.0 - 7.5                       | 1.0 - 8.0                       |
| PGC                       | Mean      | 3.34               | 2.84              | 3.76              | 2.98                            | 3.80                            |
|                           | SD        | 2.21               | 2.34              | 2.76              | 1.94                            | 2.24                            |
|                           | Range     | 1.0 - 9.0          | 1.0 - 8.0         | 1.0 - 8.0         | 1.0 - 7.0                       | 1.0 - 7.5                       |
| CON                       | Mean      | 4.35               | 4.10              | 4.11              | 4.09                            | 4.12                            |
|                           | SD        | 1.95               | 1.96              | 2.16              | 1.80                            | 1.74                            |
|                           | Range     | 1.0 - 8.0          | 1.0 - 9.0         | 1.0 - 8.0         | 1.0 - 7.5                       | 1.0 - 7.5                       |
| STA                       | Mean      | 2.46               | 2.61              | 2.19              | 2.46                            | 2.26                            |
|                           | SD        | 1.91               | 2.16              | 1.85              | 1.95                            | 1.50                            |
|                           | Range     | 1.0 - 8.0          | 1.0 - 8.0         | 1.0 - 8.0         | 1.0 - 8.5                       | 1.0 - 6.5                       |

Note: GEN=Generative; PGA=Pseudogenerative-Agentive; PGC= Pseudogenerative-Communal;  
CON=Conventional; STA=Stagnant



Table 2

Correlations between Generativity Dimension Scores

| Rater              | Generativity Dimensions |      |         |         |         |
|--------------------|-------------------------|------|---------|---------|---------|
|                    | GEN                     | PGA  | PGC     | CON     | STA     |
| <u>R1 (N=100)</u>  |                         |      |         |         |         |
| GEN                | 1.00                    | .01  | -.21*   | -.44*** | -.53*** |
| PGA                |                         | 1.00 | -.27**  | -.13    | -.22*   |
| PGC                |                         |      | 1.00    | -.02    | -.10    |
| CON                |                         |      |         | 1.00    | -.12    |
| STA                |                         |      |         |         | 1.00    |
| <u>R2 (N=49)</u>   |                         |      |         |         |         |
| GEN                | 1.00                    | -.04 | -.34*   | -.44**  | -.46*** |
| PGA                |                         | 1.00 | -.19    | -.03    | -.31*   |
| PGC                |                         |      | 1.00    | -.02    | .04     |
| CON                |                         |      |         | 1.00    | -.06    |
| STA                |                         |      |         |         | 1.00    |
| <u>R3 (N=37)</u>   |                         |      |         |         |         |
| GEN                | 1.00                    | -.20 | .08     | -.24    | -.48**  |
| PGA                |                         | 1.00 | -.64**  | -.20    | -.12    |
| PGC                |                         |      | 1.00    | -.26    | -.17    |
| CON                |                         |      |         | 1.00    | .09     |
| STA                |                         |      |         |         | 1.00    |
| <u>R1R2 (N=49)</u> |                         |      |         |         |         |
| GEN                | 1.00                    | .01  | -.32*   | -.48*** | -.58*** |
| PGA                |                         | 1.00 | -.15    | -.06    | -.32*   |
| PGC                |                         |      | 1.00    | .06     | -.05    |
| CON                |                         |      |         | 1.00    | -.05    |
| STA                |                         |      |         |         | 1.00    |
| <u>R1R3 (N=37)</u> |                         |      |         |         |         |
| GEN                | 1.00                    | -.03 | -.11    | -.32    | -.61*** |
| PGA                |                         | 1.00 | -.59*** | -.26    | -.17    |
| PGC                |                         |      | 1.00    | -.21    | -.01    |
| CON                |                         |      |         | 1.00    | -.07    |
| STA                |                         |      |         |         | 1.00    |

\*p<.05; \*\*p<.01; \*\*\*p<.001, 2-tailed

Note: R1=Rater 1; R2=Rater 2; R3=Rater 3

The *Generative* dimension was strongly negatively correlated with the *Stagnant* dimension for all three raters ( $r = -.53$ ,  $p < .001$ , Rater 1;  $r = -.46$ ,  $p < .001$ , Rater 2;  $r = -.48$ ,  $p < .01$ , Rater 3), and for average scores ( $r = -.58$ ,  $p < .001$ , Rater 1 and Rater 2;  $r = -.61$ ,  $p < .001$ , Rater 1 and Rater 3). The remaining intercorrelations were weak except for a strong negative relationship between *Generative* and *Conventional* for Rater 1 and Rater 2 ( $r = -.44$ , Rater 1,  $p < .001$ ;  $r = -.44$ , Rater 2,  $p < .01$ ). Rater 3 showed a strong negative correlation between *Pseudogenerative-Agentic* and *Pseudogenerative-Communal* ( $r = -.64$ ,  $p < .001$ ). These patterns were replicated in average score correlations (*Conventional* and *Generative*:  $r = -.48$ ,  $p < .001$ , Rater 1 and Rater 2; *Communal* and *Agentic*:  $r = -.59$ , Rater 1 and Rater 3,  $p < .001$ ). In all cases, dimensions representing generativity styles considered less than fully integrated bore a negative relationship or were only weakly related to that postulated as the most positive psychosocial outcome.

Reliability of status classifications. Categorical status classifications were analysed for inter-rater reliability using kappa coefficients, consistent with previous generativity status research. Table 3 shows the pairwise kappa values and percent agreements for consensus between Rater 1 and the two trained raters, one female (Rater 2) and one male (Rater 3).

Overall status classification reliability figures were at the low end of fair for Rater 1 and Rater 2 ( $k = .44$ ), and below acceptable range for Rater 1 and Rater 3 ( $k = .34$ ). Reliability

Table 3

Kappa Coefficients and Percentage Agreements for Status Classifications

|         | Rater 1/Rater 2 |    |    | Rater 1/Rater 3 |    |    |
|---------|-----------------|----|----|-----------------|----|----|
|         | kappa           | %  | N  | kappa           | %  | N  |
| Overall | .44             | 55 | 49 | .34             | 49 | 37 |
| Males   | .38             | 52 | 25 | .47             | 59 | 17 |
| Females | .46             | 58 | 24 | .26             | 40 | 20 |

Note: Raters 1 and 2 are female; Rater 3 is male

between Rater 1 and Rater 2 was  $k=.38$  for male subjects and  $k=.46$  for female subjects. Inter-rater reliability between Rater 1 and Rater 3 for male subjects was  $k=.47$ , and for female subjects the reliability was  $k=.26$ .

Reliability of generativity dimension scores and averages. Alpha coefficients were calculated between the author and the two trained raters on overall generativity dimensional ratings to determine how reliably these could be combined into average scores for use in further analyses. The alpha coefficients between Rater 1 and Rater 2, and between Rater 1 and Rater 3 are contained in Table 4.

Acceptable alphas on combined male and female data were obtained for Raters 1 and 2 (range=.70 to .83,  $M=.78$ ); however, those for Raters 1 and 3 failed to produce sufficient reliability for the majority of overall dimension averages (range=.54 to .70,  $M=.65$ ). Reliability was below optimal levels on *Generative* and *Pseudogenerative-Communal* dimensions for men using Rater 1 and Rater 2 averages (alpha=.52 and alpha=.66 respectively). Coefficient alpha figures for men using Rater 1 and Rater 3 average ratings ranged from .50-.80, and from .12-.71 for women. Caution is required in interpreting these secondary analyses, however, as reduced sample sizes for males and females may have resulted in restricted ranges on some status dimensions, thus artificially lowering the reliability coefficients.

Standard error of measurement was calculated for the average scores in order to provide an index of the confidence

Table 4

Coefficient Alphas for Generativity Dimension Scores

| Raters                 | Generativity Dimensions |     |     |     |     | N  |
|------------------------|-------------------------|-----|-----|-----|-----|----|
|                        | GEN                     | PGA | PGC | CON | STA |    |
| <u>Rater 1/Rater 2</u> |                         |     |     |     |     |    |
| Overall                | .70                     | .78 | .75 | .82 | .83 | 49 |
| Males                  | .52                     | .76 | .66 | .87 | .86 | 25 |
| Females                | .84                     | .77 | .77 | .77 | .81 | 24 |
| <u>Rater 1/Rater 3</u> |                         |     |     |     |     |    |
| Overall                | .70                     | .70 | .67 | .64 | .54 | 37 |
| Males                  | .80                     | .61 | .94 | .74 | .50 | 17 |
| Females                | .60                     | .71 | .12 | .44 | .57 | 20 |

with which subjects can be considered to vary absolutely on generativity dimensions when measurement error is taken into account. Table 5 provides these figures and 95% confidence intervals for each dimension.

For most dimensions, 95% confidence intervals suggest that average scores in the upper ranges can be reliably distinguished from those whose average score is in the lower ranges, particularly for Rater 1 and Rater 2 averages (range=1.3-2.4 for Rater 1 and Rater 2; range=.7-3.3 for Rater 1 and Rater 3). At the 68% confidence level, or one standard error, the bandwidth of error is reduced to approximately one point on either side of Rater 1 and Rater 2 averages (range=.7-1.2) and one to two points on either side of Rater 1 and Rater 3 averages (range=.4-1.7).

Potential rater effects. Inspection of the data showed a potentially interesting pattern of agreement between the sex of the trained raters and the sex of subjects rated, on all or most of the categorical and dimensional rating figures. Inter-rater reliability appeared higher for male subjects between Rater 1 and Rater 3 on categorical tests ( $\kappa=.47$  for males;  $\kappa=.26$  for females); the opposite pattern seemed to exist between Rater 1 and Rater 2, where reliability appeared somewhat higher for female subjects ( $\kappa=.46$  for females;  $\kappa=.38$  for males). Tests of the potential interaction between sex of independent rater and sex of subjects rated were performed by calculating the difference between the kappa coefficients obtained by the two groups of raters for male subjects, and

Table 5

Standard Error of Measurement for Average Generativity  
Dimension Scores with 95% Confidence Intervals

| Generativity Dimensions |     |        |     |        |     |        |     |        |     |        |    |
|-------------------------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|----|
| Raters                  | GEN |        | PGA |        | PGC |        | CON |        | STA |        | N  |
|                         | SEM | +/-95% | SEM | +/-95% | SEM | +/-95% | SEM | +/-95% | SEM | +/-95% |    |
| <u>R1 R2</u>            |     |        |     |        |     |        |     |        |     |        |    |
| Overall                 | 1.0 | 2.0    | .8  | 1.6    | 1.0 | 1.9    | .8  | 1.5    | .8  | 1.6    | 49 |
| Males                   | 1.2 | 2.4    | .9  | 1.7    | 1.0 | 1.9    | .7  | 1.3    | .7  | 1.3    | 25 |
| Females                 | .7  | 1.4    | .8  | 1.6    | 1.0 | 1.9    | .9  | 1.7    | .9  | 1.8    | 24 |
| <u>R1 R3</u>            |     |        |     |        |     |        |     |        |     |        |    |
| Overall                 | .9  | 1.7    | 1.1 | 2.1    | 1.3 | 2.5    | 1.0 | 2.1    | 1.0 | 2.0    | 37 |
| Males                   | .8  | 1.5    | 1.3 | 2.5    | .5  | 1.0    | 1.0 | 2.1    | .4  | .7     | 17 |
| Females                 | .9  | 1.8    | .8  | 1.6    | 1.7 | 3.3    | 1.1 | 2.1    | .9  | 1.9    | 20 |

using the pooled standard error of measurement associated with those two kappa statistics as a variance estimate for division purposes. The resulting statistic is approximately normally distributed. This procedure was repeated for the kappa coefficients obtained using female subjects. The results of these tests were nonsignificant ( $Z=1.17$ ,  $p<.25$  for female subjects; and  $Z=.45$ ,  $p<.66$  for male subjects). An appropriate statistic was not readily available for testing the pattern observed by inspection of the alpha coefficients, and significance tests on the standard error of measurement figures obtained on Rater 1 and Rater 2 average ratings and Rater 1 and Rater 3 average ratings were inconclusive. In 4 out of the possible 10 tests of interaction effects, significant differences were obtained consistent with the pattern of higher reliability where gender of subject matched the gender of the independent rater (female subjects: *Communal*,  $F(19,23)=3.04$ ,  $p<.02$ ; male subjects: *Generative*,  $F(24,16)=2.64$ ,  $p<.05$ ; *Communal*,  $F(24,16)=3.55$ ,  $p<.02$ ; *Stagnant*,  $F(24,16)=3.48$ ,  $p<.02$ ); however, in one case (male subjects: *Conventional*,  $F(16,24)=2.44$ ,  $p<.05$ ) reliability was significantly higher for subjects of the opposite sex to that of the independent rater. Statistical support for the general pattern observed through visual inspection is further constrained by the possible inflation of Type I error when conducting multiple significance tests. However, it is perhaps important to recall that failure to reject the null hypothesis is not equivalent to asserting the null hypothesis,



and the very small sample sizes available for these tests severely restrict the likelihood of any obtaining significance.

Ratings used in further analyses. Standard error of measurement is useful in determining how confidently participants' composite scores can be considered similar to or different from one another along a continuum. For this statistic, the absolute variability of the individual scores which make up the composite is of greater importance than whether their pattern is parallel. Standard error figures obtained here suggest that high scorers on generativity dimension averages can be distinguished reasonably well from low scorers.

Alpha coefficients are designed to assess consistency on the relative placement of individuals within composite scores, a feature of key importance when correlational analyses are of interest, and arguably when composites are called upon to make fine classification distinctions. Alpha coefficients for Rater 1 and Rater 2 averages confirm that these scores can justifiably be combined to produce dimension scores for both purposes, although the reliability figures for men on two dimensions remain somewhat low. However, low alpha coefficients between Rater 1 and Rater 3 on the remaining half of the sample recommend against similar averaging for these subjects, and suggest a lack of convergence on substantive issues essential to proper use of the scales. Low rater agreement on overall status, loose agreement on the strength

of association for most dimensions, and a somewhat broad standard error for some dimension averages combine to suggest Rater 3 scores do not attain sufficient reliability for use in further analyses.

Although generally preferable, the use of average scores in this study on the subsample for which reasonably firm inter-rater convergence has been obtained would seriously compromise both statistical requirements and power in tests of validity, and would disregard far too much of the available data. Therefore, predictive hypotheses were tested using Rater 1 status classifications and dimension scores. Reliability for Rater 1 dimension scores across the entire sample can be estimated by the correlation between Rater 1 and Rater 2 dimension ratings; these figures are presented in Table 6. Pearson correlations for combined male and female data are acceptable (range=.54-.71,  $M=.64$ ), although the correlation for males on the Generative dimension continues to be somewhat low ( $r=.35$ ).

#### Sex Differences in Generativity Prototype Ratings

Table 7 reports the results of a chi square analysis of sex by generativity status. As predicted, sex differences were present only in the case of *Pseudogenerative-Agentive* and *Pseudogenerative-Communal*, with more men appearing *Agentive* and more women appearing *Communal* ( $N=9$  vs  $N=3$  for men;  $N=15$  vs  $N=4$  for women). A MANOVA of sex by the five generativity dimensions indicated the presence of sex

Table 6

Pearson Correlations between Rater 1 and Rater 2 Generativity  
Dimension Scores

| R1R2    | Generativity Dimensions |     |     |     |     | N  |
|---------|-------------------------|-----|-----|-----|-----|----|
|         | GEN                     | PGA | PGC | CON | STA |    |
| Overall | .54                     | .64 | .61 | .70 | .71 | 49 |
| Males   | .35                     | .66 | .50 | .77 | .78 | 25 |
| Females | .75                     | .62 | .66 | .63 | .68 | 24 |

Table 7

Chi Square Analysis of Sex by Generativity Status

|        |          | GEN  | PGA | PGC | CON | STA | Total |
|--------|----------|------|-----|-----|-----|-----|-------|
| Male   | count    | 13   | 9   | 4   | 17  | 7   | 50    |
|        | expected | 11.5 | 6   | 9.5 | 17  | 6   |       |
| Female | count    | 10   | 3   | 15  | 17  | 5   | 50    |
|        | expected | 11.5 | 6   | 9.5 | 17  | 6   |       |
| Total  |          | 23   | 12  | 19  | 34  | 12  | 100   |

| Chi Square                 | Value | df | Significance |
|----------------------------|-------|----|--------------|
| Pearson                    | 10.09 | 4  | .039         |
| Minimum Expected Frequency | 6.00  |    |              |

differences on dimension scores (Pillai approximate  $F(4,94)=4.92$ ,  $p<.001$ ). Individual ANOVA tests replicated the pattern of results obtained using chi-square analyses, with males scoring on average about one point higher than females on *Pseudogenerative-Agentive*, and females scoring on average almost two points higher than males on *Pseudogenerative-Communal* ( $F(1,98)=7.28$ ,  $p<.008$ ; and  $F(1,98)=20.85$ ,  $p<.001$ , respectively). Table 8 provides means, standard deviations, and univariate analyses for male and female scores on the five generativity prototype dimensions.

#### Convergence between Generative Prototypes and the LGS and OPES Generativity Subscale

A correlation of .65 ( $N=100$ ) was obtained between the LGS and the OPES generativity subscale, replicating McAdams and de St. Aubin's (in press) initial findings ( $r=.66$ ,  $N=149$ ). Table 9 presents means and standard deviations of the five generativity status classifications on the LGS and OPES generativity subscale for both men and women. A MANOVA was performed using these scales as measures of close convergent validity, with generativity status and sex as grouping factors.

The MANOVA analysis revealed a highly significant main effect for generativity status on the linear scales (Pillai approximate  $F(8,180)=3.24$ ,  $p<.002$ ), and univariate tests confirmed a significant main effect for generativity status on both the LGS and the OPES generativity subscale ( $F(4,90)=6.02$ ,

Table 8

Means, Standard Deviations, Significance Tests for Sex on  
Generativity Dimension Scores

| Dimension | Males (N=50) |      | Females (N=50) |      | F(1,98) | Significance |
|-----------|--------------|------|----------------|------|---------|--------------|
|           | Mean         | SD   | Mean           | SD   |         |              |
| GEN       | 4.14         | 1.99 | 3.70           | 1.90 | 1.28    | .261         |
| PGA       | 3.28         | 1.84 | 2.34           | 1.64 | 7.28    | .008         |
| PGC       | 2.42         | 1.85 | 4.26           | 2.16 | 20.85   | .001         |
| CON       | 4.16         | 2.12 | 4.54           | 1.75 | .95     | .331         |
| STA       | 2.50         | 1.97 | 2.42           | 1.87 | .04     | .836         |

Table 9

Means and Standard Deviations of Generativity StatusClassifications on the LGS and OPES Measures of Generativity

| Status | Sex     | N  | LGS   |      | OPES-GEN |      |
|--------|---------|----|-------|------|----------|------|
|        |         |    | Mean  | SD   | Mean     | SD   |
| GEN    |         |    |       |      |          |      |
|        | Overall | 23 | 42.61 | 6.70 | 21.04    | 3.16 |
|        | Male    | 13 | 42.31 | 5.78 | 20.62    | 3.45 |
|        | Female  | 10 | 43.00 | 8.06 | 21.60    | 2.80 |
| PGA    |         |    |       |      |          |      |
|        | Overall | 12 | 37.67 | 5.73 | 20.58    | 3.66 |
|        | Male    | 9  | 38.56 | 5.81 | 21.33    | 3.84 |
|        | Female  | 3  | 35.00 | 5.57 | 18.33    | 2.08 |
| PGC    |         |    |       |      |          |      |
|        | Overall | 19 | 37.90 | 8.14 | 18.79    | 3.10 |
|        | Male    | 4  | 35.00 | 3.65 | 18.50    | 1.92 |
|        | Female  | 15 | 38.67 | 8.91 | 18.87    | 3.40 |
| CON    |         |    |       |      |          |      |
|        | Overall | 34 | 38.09 | 7.78 | 19.77    | 2.65 |
|        | Male    | 17 | 35.94 | 8.55 | 19.53    | 2.60 |
|        | Female  | 17 | 40.24 | 6.48 | 20.00    | 2.76 |
| STA    |         |    |       |      |          |      |
|        | Overall | 12 | 29.92 | 5.45 | 16.25    | 2.80 |
|        | Male    | 7  | 28.57 | 4.86 | 15.71    | 3.15 |
|        | Female  | 5  | 31.80 | 6.22 | 17.00    | 2.35 |

$p < .001$ ; and  $F(4, 90) = 5.06$ ,  $p < .001$  respectively). No significant sex by status interaction was found (Pillai approximate  $F(8, 180) = .68$ ,  $p < .71$ ), and the main effect for sex on the LGS and OPES generativity subscale was also nonsignificant (Pillai approximate  $F(2, 89) = .69$ ,  $p < .50$ ). Therefore, male and female data were combined in contrast analyses. Figures 2 and 3 show the plots of these scales with generativity status groupings.

Table 10 contains the results of pairwise contrast analyses for both the LGS and the OPES generativity subscale. As predicted, individuals classified as *Generative* scored significantly higher than those classified as *Stagnant* on linear measures of generativity ( $p < .01$ , LGS;  $p < .01$ , OPES-GEN, Tukey studentized range statistic). *Conventional* and *Pseudogenerative-Communal* were similarly distinguished from *Stagnant* on the LGS ( $p < .01$  and  $p < .05$  respectively), as were *Conventional* and *Pseudogenerative-Agentive* on the OPES generativity subscale ( $p < .01$ ). The overall pattern of results supported predictions on both measures, with *Generative* and *Stagnant* obtaining highest and lowest scores respectively, and the remaining statuses scoring between these extremes.

Correlations between the LGS, the OPES generativity subscale, and generativity dimensions lend additional support to these findings. Table 11 contains the correlations of each prototype dimension with the linear generativity measures for both men and women.

Ratings indicating the degree to which individuals



Figure 2

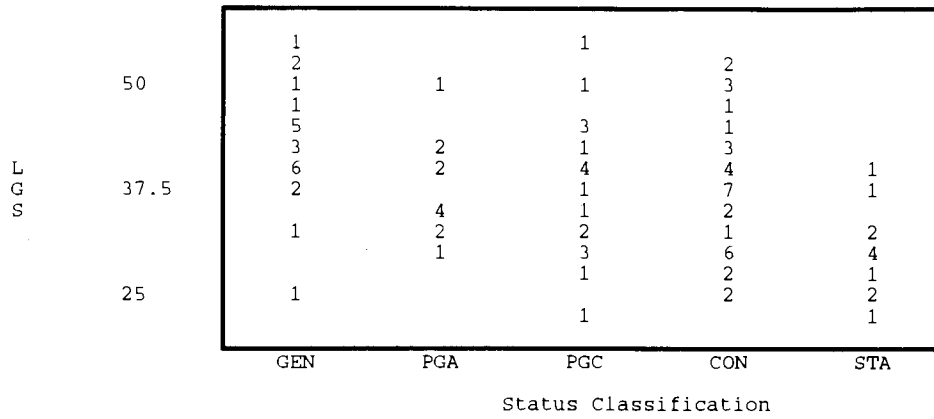
Plot of LGS with Generativity Status

Figure 3

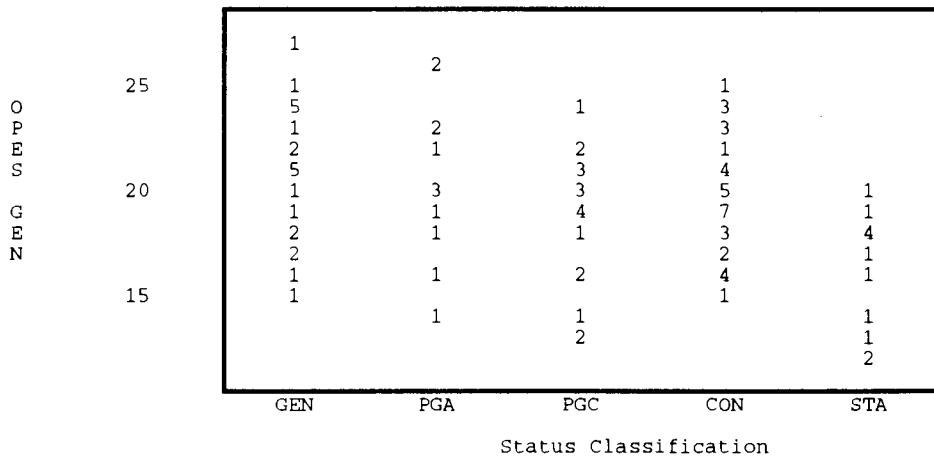
Plot of OPES Generativity Subscale with Generativity Status

Table 10

Contrasts of Generativity Status on LGS and OPES Generativity Measures

| LGS   | STATUS MATRIX |     |     |     |     | OPES-GEN | STATUS MATRIX |      |     |     |     |     |     |
|-------|---------------|-----|-----|-----|-----|----------|---------------|------|-----|-----|-----|-----|-----|
|       | Mean          | GEN | PGA | PGC | CON |          | STA           | Mean | GEN | PGA | PGC | CON | STA |
| 42.61 | GEN           |     |     |     |     | **       | 21.04         | GEN  |     |     |     |     | **  |
| 37.67 | PGA           |     |     |     |     |          | 20.58         | PGA  |     |     |     |     | **  |
| 37.90 | PGC           |     |     |     | *   |          | 18.79         | PGC  |     |     |     |     |     |
| 38.09 | CON           |     |     |     | **  |          | 19.76         | CON  |     |     |     |     | **  |
| 29.92 | STA           | **  |     | *   | **  |          | 16.25         | STA  | **  | **  |     | **  |     |

\* denotes pairs of groups significantly different,  $p < .05$ , Tukey studentized range statistic

\*\* denotes pairs of groups significantly different,  $p < .01$ , Tukey studentized range statistic

Table 11

Correlations between LGS, OPES Generativity Subscale and  
Generativity Dimension Scores

| Scale    | Generativity Dimensions |      |      |      |         | N   |
|----------|-------------------------|------|------|------|---------|-----|
|          | GEN                     | PGA  | PGC  | CON  | STA     |     |
| LGS      |                         |      |      |      |         |     |
| Overall  | .40***                  | .10  | .08  | -.08 | -.46*** | 100 |
| Males    | .53***                  | .18  | .10  | -.16 | -.57*** | 50  |
| Females  | .33*                    | .10  | -.04 | -.01 | -.35**  | 50  |
| OPES-GEN |                         |      |      |      |         |     |
| Overall  | .32***                  | .06  | .03  | .03  | -.47*** | 100 |
| Males    | .35**                   | .20  | .02  | .00  | -.56*** | 50  |
| Females  | .29*                    | -.12 | .03  | .07  | -.37**  | 50  |

\*p<.05; \*\*p<.01; \*\*\* p<.001, two-tailed

matched the *Generative* prototype were positively correlated with linear generativity measures (LGS:  $r=.40$ ,  $p<.001$ ; OPES-GEN:  $r=.32$ ,  $p<.001$ ), and ratings on the *Stagnant* dimension were negatively correlated with these measures (LGS:  $r=-.46$ ,  $p<.001$ ; OPES-GEN:  $r=-.47$ ,  $p<.001$ ). Ratings on the remaining status prototypes were weakly and nonsignificantly correlated with the LGS and the OPES generativity subscale.

Ratings for women on the *Generative* dimension seemed somewhat less strongly correlated with linear generativity measures than those for men (LGS:  $r=.33$  and  $r=.53$  respectively; OPES-GEN:  $r=.29$  and  $r=.35$  respectively); however, the differences were nonsignificant (LGS:  $Z=1.21$ ,  $p<.23$ ; OPES-GEN:  $Z=.29$ ,  $p<.77$ ). Similarly, ratings for women on the *Stagnant* dimension seemed somewhat less strongly related to the dependent measures than those for men (LGS:  $r=-.35$  and  $r=-.57$  respectively;  $r=-.37$  and  $r=-.56$  respectively). These differences were also nonsignificant (LGS:  $Z=-1.36$ ,  $p<.17$ ; OPES-GEN:  $Z=-1.23$ ,  $p<.22$ ), and the direction of predicted relationships between the two scales and generativity prototype ratings were maintained for both genders.

Of potential interest is the apparently stronger positive correlation for men between *Pseudogenerative-Agentive* and the LGS and, more particularly, the OPES generativity subscale. In the latter case, a weak negative correlation was obtained for women ( $r=-.12$ ), in contrast to a positive correlation for men ( $r=.20$ ). These correlations were not significantly

different from each other, although a slight trend was present ( $Z=1.59$ ,  $p<.11$ ). The sex differences evident in ratings assigned on the *Pseudogenerative-Agentive* dimension and status classifications suggest caution should be exercised in interpreting this finding, however, as atypical outliers can lead to spurious results when ranges are generally restricted.

### Convergence between Generativity Prototypes and Overall Psychosocial Adjustment

A correlation of .61 ( $N=100$ ) was obtained between the OPES generativity subscale and the OPES Total scale (excluding the generativity subscale), suggesting strong links between generativity and the resolution of issues proposed to precede this stage developmentally. Table 12 contains the means and standard deviations of generativity prototype classifications on the OPES Total scale for both men and women.

An analysis of variance was performed using the OPES Total score as an index of general psychosocial adjustment, with sex and generativity status classifications as grouping variables. No sex main effect or sex by generativity status interaction were observed ( $F(1,90)=.22$   $p<.64$ ;  $F(1,90)=.60$ ,  $p<.66$  respectively). As Levene's test for homogeneity of variance approached significance ( $F(4,90)=2.15$ ,  $p<.08$ ) on the status factor, the status main effect was assessed using the Brown-Forsythe analysis of variance formula. Results indicate a highly significant main effect for generativity status on the OPES Total scale ( $F(4,33)=5.76$ ,  $p<.001$ ). Male and female

Table 12

Means and Standard Deviations of Generativity Status  
Classifications on the OPES Total Scale Measure of Overall  
Psychosocial Adjustment

| Status | Sex     | N  | OPES TOTAL |       |
|--------|---------|----|------------|-------|
|        |         |    | Mean       | SD    |
| GEN    | Overall | 23 | 143.74     | 25.67 |
|        | Male    | 13 | 140.69     | 29.06 |
|        | Female  | 10 | 147.70     | 21.31 |
| PGA    | Overall | 12 | 136.67     | 17.45 |
|        | Male    | 9  | 138.33     | 18.32 |
|        | Female  | 3  | 131.67     | 16.77 |
| PGC    | Overall | 19 | 127.26     | 16.37 |
|        | Male    | 4  | 119.00     | 12.19 |
|        | Female  | 15 | 129.47     | 16.97 |
| CON    | Overall | 34 | 142.12     | 17.15 |
|        | Male    | 17 | 138.47     | 16.11 |
|        | Female  | 17 | 145.77     | 17.86 |
| STA    | Overall | 12 | 121.08     | 15.73 |
|        | Male    | 7  | 124.14     | 20.12 |
|        | Female  | 5  | 116.80     | 5.85  |

data were combined for group contrast analyses; these are contained in Table 13. Figure 4 shows the plot of the OPES Total scale against generativity status groupings using the pooled male and female scores.

Individuals classified as *Generative* scored significantly higher on the OPES Total scale than individuals classified as *Stagnant* ( $p < .05$ , Tukey studentized range statistic). Scores obtained by those in the *Conventional* classification were also significantly higher than *Stagnant* ( $p < .05$ , Tukey studentized range statistic). As predicted, mean scores of individuals classified as *Generative* and *Stagnant* were highest and lowest respectively on the measure of overall psychosocial adjustment.

Correlations between dimensional ratings and the OPES Total scale confirm these results, and are presented in Table 14. Ratings on the degree of correspondence to the *Generative* prototype showed a trend for a modest positive correlation with the OPES Total ( $r = .17$ ,  $p < .09$ ), while those on *Stagnant* dimension obtained a moderate negative correlation ( $r = -.34$ ,  $p < .001$ ). A slightly more elevated correlation between the OPES Total scale and *Generative* ratings, as well as a somewhat stronger negative correlation between the *Stagnant* ratings and the OPES Total scale was observed for women compared to men ( $r = .22$  vs  $r = .14$ , and  $r = -.44$  vs  $r = -.24$  respectively); however, these differences were nonsignificant (*Generative* and OPES Total:  $Z = .40$ ,  $p < .69$ ; *Stagnant* and OPES Total:  $Z = 1.10$ ,  $p < .27$ ).

Table 13

Contrasts of Generativity Status on the OPES Total Scale

| OPES TOTAL | STATUS MATRIX |     |     |     |     |
|------------|---------------|-----|-----|-----|-----|
| Mean       | GEN           | PGA | PGC | CON | STA |
| 143.74     | GEN           |     |     |     | *   |
| 137.67     | PGA           |     |     |     |     |
| 127.26     | PGC           |     |     |     |     |
| 142.12     | CON           |     |     |     | *   |
| 121.08     | STA           | •   |     | *   |     |

\* denotes pairs of groups significantly different,  
 $p < .05$ , Tukey studentized range statistic



Figure 4

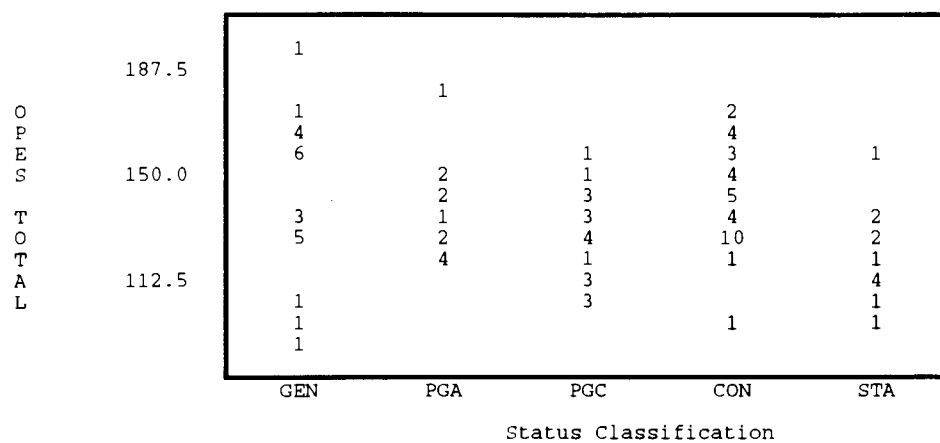
Plot of OPES Total Scale with Generativity Status

Table 14

Correlations between OPES Total Scale and Generativity  
Dimension Scores

| Scale      | Generativity Dimensions |     |      |     |         | N   |
|------------|-------------------------|-----|------|-----|---------|-----|
|            | GEN                     | PGA | PGC  | CON | STA     |     |
| OPES TOTAL |                         |     |      |     |         |     |
| Overall    | .17                     | .03 | -.13 | .14 | -.34*** | 100 |
| Males      | .14                     | .05 | -.27 | .09 | -.24    | 50  |
| Females    | .22                     | .05 | -.07 | .20 | -.44*** | 50  |

\*\*\* p<.001, two-tailed; \*\* p<.01, two-tailed; \* p<.05, two-tailed

While correlations between the degree of correspondance to the *Generative* prototype and the *Stagnant* prototype with the OPES Total scale were more modest for males, with neither attaining significance from zero, hypothesized directionality was nevertheless preserved, and the correlations between overall psychosocial adjustment and these theoretically opposing prototype resolutions approached significant difference from each other ( $t(47)=1.56$ ,  $p<.065$ ).

The pattern of correlations between the remaining status prototype ratings and this measure of overall psychosocial adjustment were consistent with results obtained using categorical status classifications. The correlation between the *Conventional* dimension and the OPES Total scale very nearly approximated that obtained between the *Generative* prototype and overall psychosocial adjustment ( $r=.14$  and  $r=.17$  respectively). Correlations between scores on the *Pseudogenerative-Agentive* and *Pseudogenerative-Communal* prototypes and the OPES Total scale also followed the ordering obtained using category mean scores ( $r=.03$  and  $r=-.13$  respectively). While the negative correlation between *Pseudogenerative-Communal* and the OPES Total scale for men approached significance ( $r=-.27$ ,  $p<.07$ ) compared to that obtained for women ( $r=-.07$ ,  $p<.63$ ), the apparent difference between these two correlations by gender proved nonsignificant in analyses ( $Z=-.98$ ,  $p<.34$ ), and may be an artifact of sex differences in prototype scores.

### Convergence between Generativity Prototypes and NEO Openness to Experience

While analyses of the generativity status classifications and dimensional ratings on measures of close convergence and overall psychosocial adjustment produced results consistent with the conceptualization of *Generative* and *Stagnant* prototypes as representative of positive and negative poles of generativity, they provide little direct support for the theoretical distinctions associated with the remaining status resolutions. Individuals classified *Conventional*, in particular, performed similarly to *Generative* across all three measures discussed to this point. Therefore, the NEO Openness to Experience domain and Values facet scales are examined next to test the hypothesized relationships between these two prototypes and a general psychological willingness to tolerate new experiences, values and ideas.

The intercorrelation obtained between the NEO Values and Openness domain scales was  $r=.56$ , ( $N=99$ ), consistent with that reported by Costa and McCrae (1989) ( $r=.57$ ,  $N=983$ ). Table 15 contains means and standard deviations for scores on these scales for both men and women. A MANOVA was performed using sex and status classification as grouping variables for scores on the Openness measures. A highly significant main effect for generativity status was obtained (Pillai approximate  $F(8,178)=2.46$ ,  $p<.015$ ). No significant sex effect and no sex by generativity status interaction was present (Pillai approximate  $F(2,88)=1.69$ ,  $p<.19$ ; and Pillai approximate

Table 15

Means and Standard Deviations of Generativity Status  
Classifications on the NEO-Values and NEO-Openness to  
Experience Domain Scales

| Status | Sex     | N  | NEO-VALUES |      | NEO-OPENNESS |       |
|--------|---------|----|------------|------|--------------|-------|
|        |         |    | Mean       | SD   | Mean         | SD    |
| GEN    | Overall | 23 | 24.70      | 3.02 | 130.70       | 13.52 |
|        | Male    | 13 | 25.23      | 3.49 | 128.62       | 15.74 |
|        | Female  | 10 | 24.00      | 2.26 | 133.40       | 10.11 |
| PGA    | Overall | 12 | 24.67      | 2.93 | 130.75       | 17.44 |
|        | Male    | 9  | 25.11      | 3.30 | 131.56       | 18.73 |
|        | Female  | 3  | 23.33      | .58  | 128.33       | 16.07 |
| PGC    | Overall | 19 | 22.74      | 5.51 | 122.53       | 15.00 |
|        | Male    | 4  | 24.25      | 3.20 | 119.50       | 6.46  |
|        | Female  | 15 | 22.33      | 6.00 | 123.33       | 16.65 |
| CON    | Overall | 33 | 21.03      | 5.10 | 113.79       | 18.37 |
|        | Male    | 17 | 21.29      | 4.44 | 111.59       | 19.26 |
|        | Female  | 16 | 20.75      | 5.85 | 116.13       | 17.69 |
| STA    | Overall | 12 | 23.58      | 2.88 | 118.33       | 11.84 |
|        | Males   | 7  | 24.72      | 3.04 | 122.29       | 12.72 |
|        | Females | 5  | 22.00      | 1.87 | 112.80       | 8.79  |

$F(8,178)=.30$ ,  $p<.96$ , respectively). Univariate analysis of generativity status on the Openness domain scale produced a highly significant result ( $F=4.61$ ,  $p<.002$ ). Analysis of the Values scale using the Brown-Forsythe formula to control for heterogeneity of variance (Levene's  $F(4,89)=2.60$ ,  $p<.04$ ) also resulted in a significant effect ( $F(4,54)=3.01$ ,  $p<.025$ ). Figure 5 and Figure 6 show the plots of scores on the NEO Values and the Openness to Experience domain scales grouped by generativity status classification for combined male and female data.

Both the specific and the general scales showed differentiation between the *Conventional* status and the *Generative* Status in contrast analyses, contained in Table 16. Individuals classified as *Generative* scored higher on average than those classified as *Conventional* on both measures of Openness to Experience (NEO Values:  $p<.05$ ; and NEO-Openness domain scale:  $p<.01$ , Tukey studentized range statistic). In addition, contrary to expectation, the mean score of individuals classified *Pseudogenerative-Agentive* was also significantly higher than that of individuals classified as *Conventional* on the Openness to Experience overall domain scale ( $p<.05$ , Tukey studentized range statistic).

Correlations between these measures and generativity multidimensional ratings confirm the pattern of results obtained with status classification analyses, and are presented in Table 17. Ratings indicating the degree to which individuals matched the *Generative* prototype were

Figure 5

Plot of NEO Values Scale with Generativity Status

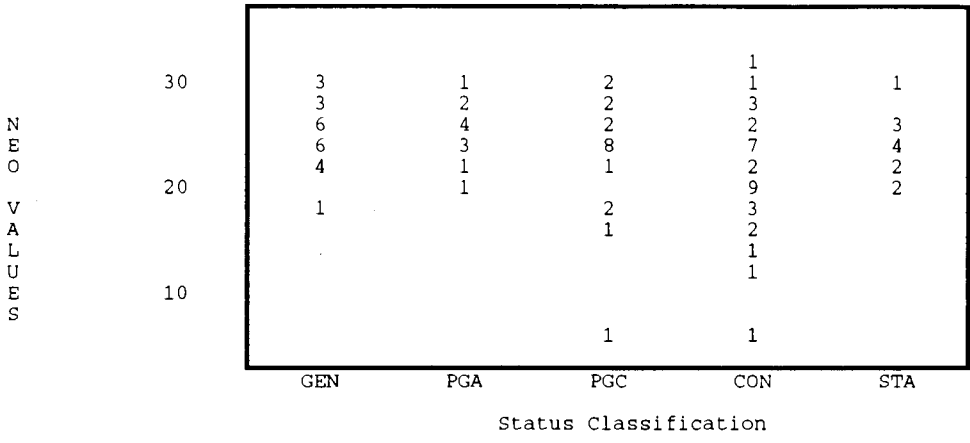


Figure 6

Plot of NEO Values Scale with Generativity Status

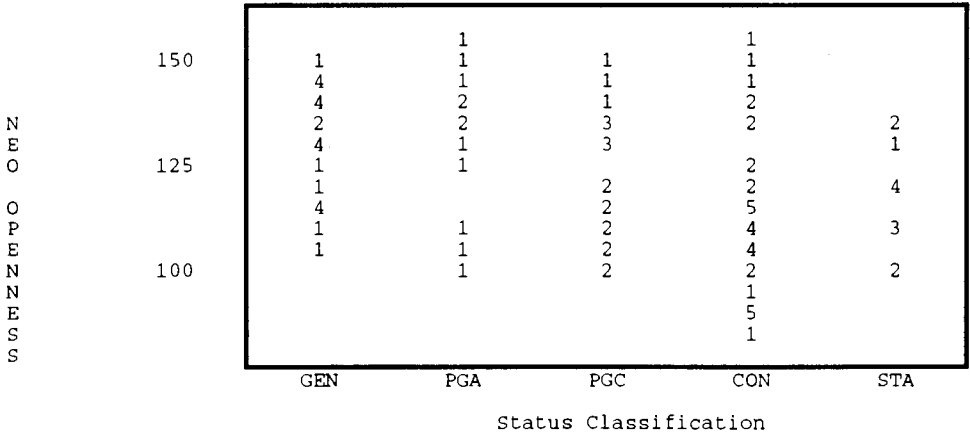


Table 16

Contrasts of Generativity Status on NEO Values and Openness to Experience Domain Scales

| VALUES | STATUS MATRIX |     |     |     |     | OPENNESS | STATUS MATRIX |     |     |     |     |
|--------|---------------|-----|-----|-----|-----|----------|---------------|-----|-----|-----|-----|
|        | GEN           | PGA | PGC | CON | STA |          | Mean          | GEN | PGA | PGC | CON |
| 24.70  | GEN           |     |     | *   |     | 130.70   | GEN           |     |     |     | **  |
| 24.67  | PGA           |     |     |     |     | 130.75   | PGA           |     |     |     | *   |
| 22.74  | PGC           |     |     |     |     | 122.53   | PGC           |     |     |     |     |
| 21.03  | CON           | *   |     |     |     | 113.79   | CON           | **  | *   |     |     |
| 23.58  | STA           |     |     |     |     | 118.33   | STA           |     |     |     |     |

\* denotes pairs of groups significantly different,  $p < .05$ , Tukey studentized range statistic  
 \*\* denotes pairs of groups significantly different,  $p < .01$ , Tukey studentized range statistic



Table 17

Correlations between NEO Values and Openness to Experience  
Domain Scales and Generativity Prototype Dimension Scores

| Scale        | Generativity Prototype |      |      |         |       | N  |
|--------------|------------------------|------|------|---------|-------|----|
|              | GEN                    | PGA  | PGC  | CON     | STA   |    |
| NEO-VALUES   |                        |      |      |         |       |    |
| Overall      | .34***                 | .09  | -.04 | -.39*** | -.08  | 99 |
| Males        | .29*                   | -.07 | .11  | -.48*** | -.08  | 50 |
| Females      | .36**                  | .17  | -.01 | -.30*   | -.08  | 49 |
| NEO-OPENNESS |                        |      |      |         |       |    |
| Overall      | .38***                 | .11  | .05  | -.38*** | -.20* | 99 |
| Males        | .28*                   | .08  | .05  | -.40**  | -.14  | 50 |
| Females      | .52***                 | .18  | .05  | -.38**  | -.27  | 49 |

\*p<.05; \*\*p<.01; \*\*\*p<.001, two-tailed

positively correlated with measures of Openness (NEO Values:  $r=.34$ ,  $p<.001$ ; NEO Openness domain scale:  $r=.38$ ,  $p<.001$ ), and ratings on the *Conventional* dimension were negatively correlated with these measures (NEO Values:  $r=-.39$ ,  $p<.001$ ; NEO Openness domain scale:  $r=-.38$ ,  $p<.001$ ). In addition, a modest, significant negative correlation was obtained between scores on *Stagnant* and the Openness domain scale ( $r=-.20$ ,  $p<.05$ ). Ratings of the remaining status prototypes were weakly and nonsignificantly correlated with the Values and Openness domain scales.

As a further check for the potential theoretical differences suggested between the generativity status approach and the interpretations by other researchers of the generativity vs stagnation construct, correlations were calculated between the LGS and the NEO Values facet and Openness to Experience domain scales, as well as between the OPES generativity subscale and these scales. Correlations between linear generativity measures and the Openness to Experience domain scale (LGS and Openness:  $r=.35$ ,  $p<.001$ ; OPES-GEN and Openness:  $r=.22$ ,  $p<.05$ ) were similar to that obtained between the *Generative* dimension ratings and the domain scale ( $r=.38$ ,  $p<.001$ ). However, both the LGS and the OPES generativity subscale were uncorrelated with the Values facet scale ( $r=.11$ ,  $p<.31$ , and  $r=.04$ ,  $p<.67$  respectively), while a positive relationship was obtained between *Generative* dimension ratings and the Values facet scale ( $r=.34$ ,  $p<.001$ ). Using the 99 subjects for which scores on the NEO facet and

domain scales were available, t-tests were performed to determine whether correlations between the linear generativity measures and Values could be considered reliably distinct from that obtained between Values and the *Generative* dimension ratings. The correlation between the LGS and Values was not significantly lower than that obtained between the *Generative* dimension ratings and Values, although a very slight trend was present ( $t(96)=1.56$ ,  $p<.14$ ). However, the correlation between the OPES generativity subscale and Values was significantly lower than that obtained between Values and the *Generative* dimension ratings ( $t(96)=2.06$ ,  $p<.05$ ). These results, combined with the differences between the performance of the *Conventional* prototype on the generativity scales and on the measures of Openness, provide some tentative support for notion that the Generativity Status Measure and the linear generativity measures used in this study emphasize somewhat different aspects of Erikson's construct of generativity vs stagnation.

## CHAPTER V

## DISCUSSION

Inter-Rater Reliability

Somewhat reduced kappa coefficients were obtained in this study compared to those observed on the second set of subjects in the initial generativity status investigation. Although improvements across the two waves of data for the latter study suggested that reliability should continue to increase with more detailed classification decision rules and a larger sample size, the present study did not achieve good inter-rater reliability from strictly categorical classifications. However, some gains in reliability were obtained, for one independent rater, by assessing the degree to which individuals approximated each generativity status prototype. The use of categorical ratings alone, then, may produce an underestimate of the true degree of convergence between raters.

The use of dimensional scores on each status may offer another benefit in addition to enhanced reliability. This further advantage of the revised scoring method lies in its ability to encode important information regarding the complex interaction of generativity styles within individuals. Individuals rarely display absolute levels of vital involvement and tolerance, and consequently approximate generativity status prototypes to varying degrees. This

information is of potential value not only to the empirical investigation of this stage of life, but may also ultimately be of clinical relevance to assisting individuals experiencing crisis around generativity issues. Categorical and multidimensional coding strategies performed comparably in predictive analyses using Rater 1 (the investigator) ratings, implying complementarity of these techniques for research purposes. Averaging across raters to produce a best-fitting category as well as scores on the remaining status prototypes holds promise as a technique to capture both the most salient and the supporting aspects of generativity profiles.

In this study, low reliability with one of the independent raters, as well as power considerations, led to the decision to use Rater 1 judgements instead of average ratings in predictive analyses. The use of Rater 1 judgements alone, together with the limited reliability, potentially calls into question the objectivity of the scoring procedure and, hence, the generalizability of the results. Fortunately, validity analyses using composite scores for the subsample assessed by Rater 1 and Rater 2 provide some reassurance of the stability of data patterns observed using Rater 1 scores alone. Mean scores for statuses derived from Rater 1 and Rater 2 average dimension scores were in the hypothesized direction for both linear measures of generativity, and for both measures of Openness to Experience, although statistical significance was hampered by power limitations. Correlational patterns using average dimension scores were comparable to

those obtained on the full sample for all dependent measures, with many coefficients attaining significance even with the reduced sample size.

Difficulties in achieving inter-rater reliability for the Generativity Status Measure are somewhat puzzling in the face of the rather robust predictive support for the approach garnered in this study, and represent a weakness in generativity status studies to date. However, Erikson's constructs are complex and difficult to operationalize, and the wide scope of his vision for the generative adult makes this stage perhaps especially challenging to capture in measurement form, particularly when gross qualitative judgements are required. Generativity status interviews are not easily scored, and a certain degree of clinical skill is likely necessary to achieve accurate classifications and dimensional ratings. Other rater characteristics may also play an important role in establishing inter-rater reliability. Investigators using the status typology methodology have commented on the possible importance of rater identity issues in obtaining accurate identity status assessments. Marcia et al. (in press) have observed that raters considered Identity Achieved, through informal observation, seemed to perform more accurately than those of other identity status resolutions, although this hypothesis has not been directly tested. Loevinger and Wessler (1970) recommend that raters of the Washington Sentence Completion Test of ego development have some graduate training in

psychology, be of above average intelligence, and operate at a relatively high level of ego development. They suggest, based solely on impressionistic experience, that individuals lower than an I-4 level of ego development may be limited in their ability to discriminate upper level responses.

While acceptable inter-rater reliability on generativity dimension scores was obtained with only one of the raters in this study, inspection of the data seemed to show independent scorers as obtaining more convergence with the author on ratings of individuals of the same sex as themselves, compared to individuals of the opposite sex. Analyses conducted to assess this potential interaction were largely nonsignificant, and therefore no reliable conclusions can be drawn from these patterns. Nevertheless, the logic of developmental theory offers a purely speculative hypothesis for insight into rater characteristics of potential importance in generativity status research. All participants in this study were between 20-30 years older than the independent raters and, according to psychosocial theory, facing somewhat different developmental issues. It may be easier to "stretch" beyond one's own developmental stage to understand and assess the progress of individuals on generativity tasks when those individuals share the kind of salient aspects of socialization and biology that are represented by gender. While life experience, training, clinical acumen, and a variety of other factors surely influence success in rating complex constructs, psychosocial developmental issues may also be involved. Certainly, the

whole question of rater characteristics in psychosocial research is intriguing and merits direct empirical investigation. Future studies of the generativity status prototypes may be well advised to employ coders nearer the age at which generativity issues are presumed to be salient, and who have a modicum of clinical training.

### Status Prototype Distribution

Status distribution in the first generativity status study for participants on whom classification consensus was obtained was remarkably similar in most cases to that obtained in this study, using Rater 1 classifications. In the initial study, *Generative* was the largest single classification (35%), followed by *Conventional* (31%), *Communal* (15%), *Agentic* (12%) and *Stagnant* (8%), whereas in the present study, *Generative* classifications represented 23% of the individuals interviewed, *Conventional* 34%, *Communal* 19%, *Agentic* 12% and *Stagnant* 12%.

The degree to which these percentages accurately reflect population baserates is of course unknown, and the nonrandom sampling that results when volunteer populations are used may have generated overrepresentations or underrepresentations of one or all status prototypes in this study. However, the low rate of participation in both studies by individuals with relatively high degrees of *Agentic* or *Stagnant* characteristics is entirely consistent with the theoretical composition of these prototypes. Additionally, on an anecdotal basis,



relatively greater difficulties seemed present in dealings with individuals who approximated these statuses. Of those classified as *Stagnant*, 42% were late in returning protocols, compared to 21% of those classified as *Conventional*, 17% for *Generative* and 1% for *Communal*. Although only 17% of those classified as *Agentic* were late, one *Agentic* individual required great persistence for return of the written protocol, through repeated phone calls and finally an arranged protocol pickup, even though he professed continued willingness to participate at each contact.

Less easily explained, and perhaps somewhat disturbing, is the relatively low overall rate of *Generative* individuals assessed in this study. While other highly *Generative* individuals may have been too busy to participate, or may simply not have come in contact with the fliers advertising the study, another possibility exists, one which is consonant with the thinking of at least one generativity theorist. Browning (1975) has suggested that modern society is in urgent need of more generative individuals, and a more caring and responsible approach to environmental, family, and societal concerns. For Browning, generativity is a central issue facing humanity today, one which challenges us to form a global community committed to careful guardianship and nurturance of the external world on which we depend, and the new generations which will be its inheritors. Browning's concerns about the dearth of highly generative individuals in modern society may be reflected through the relatively small

number of *Generative* classifications in the present study. However, it is perhaps also important to recall that the intermediate prototypes proposed in the status model are not considered devoid of generative strengths, but rather represent qualitatively different modes of addressing generative issues, each with its own particular limitations.

Status distribution by gender was consistent with predictions. Sex differences in status classification and on prototype dimensions were present only for *Pseudogenerative-  
Agentic* and *Communal* prototypes, with more men appearing *Agentic*, and more women appearing *Communal* in this sample. Socialization factors provide some logic for the gender distribution of the cohort in this study. Whether sex differences in *Agentic* and *Communal* resolutions will be maintained when education and employment opportunities are more equal for men and women will be of interest in future studies. However, categorical analyses of gender distribution were based on very small numbers; this, and the general skewed nature of the corresponding dimension ratings underscore the need for caution in affirming gender differences in prototype resolution at this early stage of investigation. Socio-economic factors, and environmental circumstances may combine to promote one or another status resolution regardless of gender, and may be instrumental generally in precipitating movement to a new resolution. For instance, an individual who has been highly *Agentic* in his or her approach to generativity issues may be thrust into situations which pull for an

expansion of caregiving concern beyond personal ambitions. Similarly, someone who has been highly *Communal* may be forced to loosen ties with those nurtured as they seek independent directions. Whether these *Communal* and *Agentic* individuals successfully resolve the challenge to balance personal needs with those of others in a generativity sense would seem likely to depend on a number of factors, including the particulars of their life circumstances. Research using younger samples, and investigations designed to take into account the influence of socio-economic and situational factors, in addition to gender, may help determine the relative contribution of these factors to generativity status composition. Earlier stage resolutions may also play an important, and as yet unknown, role in shaping an individual's approach to and management of generativity issues.

### Validity

Hypothesized relationships between the status prototypes and dependent measures were obtained, providing support for the status model at this early stage of validation. Both categorical and multidimensional ratings showed convergence between operationalizations of *Generative* and *Stagnant* and two different linear measures of generativity. Moreover, the *Pseudogenerative-Agentic*, *Communal*, and *Conventional* prototype classifications also scored higher than *Stagnant* on one or the other of these scale measures, in keeping with their conceptualization as intermediate generativity resolutions.

The fact that both *Pseudogenerative-Agentive* and *Communal* scored significantly higher than *Stagnant* on linear generativity measures is all the more interesting in light of Van de Water and McAdams's (1989) finding that narcissism was modestly positively correlated with the generativity subscale of the Ochse and Plug Erikson Scale, rather than negatively correlated as expected. Perhaps a modicum of the self-absorption hypothesized as characteristic of these status prototypes is important in the resolution of generativity issues, and may be reflected to some, possibly lesser, extent in both *Generative* and *Conventional* prototypes as well. The generativity status model suggests that a degree of self-interest, through vital involvement in and tolerance of the self, is fundamental to the continued growth of the adult individual engaged in generative tasks. The role of self-interest in generative concerns represents an area of future investigation for the status model.

Both the *Generative* and *Conventional* status classifications scored higher than *Stagnant* on the Ochse and Plug Erikson Scale, used here as an index of overall psychosocial adjustment. The correlation between *Generative* and adjustment was only marginally significant, suggesting that the psychosocial gains attributed to previous stage issues may play a modest role in predicting outcome for the status postulated as the most positive generative resolution. However, the moderate negative relationship between *Stagnant* and adjustment may mean that failure to succeed in other

Eriksonian developmental tasks is a fairly good predictor of difficulties in generativity. Like most of the multi-stage measures of Erikson's constructs, Ochse and Plug's (1986) scale is relatively new, and a body of validity data has not yet been assembled regarding the appropriateness of its use as an index of psychosocial adjustment. Nevertheless, the results obtained in this study seem to support that feature of the scale.

No sex differences in the performance of generativity status classifications on convergent measures of generativity and psychosocial adjustment were present. However, a slight trend for a higher correlation for men than for women between *Pseudogenerative-Agentive* dimensional ratings and the Ochse and Plug generativity subscale was observed. Quite possibly, biases in sex role socialization make instrumental expression more complex and difficult for women who follow a more *Agentive* path, at least in this cohort. However, the sex differences in *Agentive* dimension scores observed in this study suggest caution is required in interpreting this finding. Moreover, the small samples which resulted in factorial analyses when gender was considered recommend caution in interpreting the presence or absence of gender effects in predictive analyses using status classifications generally. More research, with larger sample sizes, is required to further investigate this important issue.

Both interview and self-report measures contain potential sources of error which can limit their usefulness. Honesty

and self-awareness play a role in determining the accuracy of self-report instruments, while rater personality characteristics, objectivity, and competence may influence assessments using an interview methodology. Peculiarities of instrument construction and administration can present additional concerns. In this study, several participants expressed confusion over the wording of some of the self-report test items, particularly with respect to the Ochse and Plug Erikson Scale, and the extent to which this influenced results is unknown. Occasionally, however, the self-report information proved somewhat more revealing of personal feelings than the interview data. For instance, one man who seemed highly successful and confident in the interview situation endorsed items on the Ochse and Plug Erikson Scale which reflected the opposite characteristics. Nevertheless, despite the difficulties inherent in each strategy, the convergence obtained with these two distinct methodologies is encouraging evidence of shared aspects of generativity in measurement operationalizations.

Analyses using the NEO Openness to Experience domain and Values facet scales indicated both conceptual similarities and differences between the approach to generativity taken by the status prototype model and those of other investigators. The *Generative* prototype, theoretically high in tolerance for self and others, obtained a moderate positive correlation with both measures of Openness. The *Conventional* prototype, theoretically low in tolerance for self and others, while

scoring highly on linear measures of generativity and on overall psychosocial adjustment, scored the lowest of all prototype classifications on the Values facet and Openness to Experience domain scales. *Stagnant*, characterized by low or laissez-faire tolerance, was modestly negatively correlated with the Openness to Experience domain scale.

Confirmation of the difference in emphasis between approaches to generativity was evidenced by analyses of the relationship between the linear generativity measures and the Values facet scale of the NEO. While correlations between generativity scales and the Openness to Experience domain scale were similar to that obtained with the *Generative* dimension scores, both linear generativity measures were uncorrelated with Openness to Values. Although only the generativity subscale from the Ochse and Plug Erikson Scale was found to correlate significantly lower than the *Generative* prototype dimension with NEO Values, these analyses, together with the performance of *Conventional* on both linear generativity scales and on the Openness scales, seem to indicate some conceptual differences between generativity measures in ways consistent with the status model's defining criterion of tolerance.

Contrary to prediction, however, the *Pseudogenerative-Agentive* prototype, theoretically low in tolerance for others, also scored significantly higher than *Conventional* in both categorical and correlational analyses on the NEO measure of general openness to new experiences represented by the domain

scale. Possibly the involvement in self as self relates to the world, and the high tolerance for self that is postulated to accompany this characteristic of the *Pseudogenerative-Agentive* prototype, results in an adventuresome individual more generally open to a variety of experiences than had been originally anticipated. Further investigations may reveal differential effects of tolerance for self and tolerance for others, as defined within the status model, on psychological functioning.

#### Future Directions

In general, the generativity status profiles in this study represent what one would expect as a final resolution of the stage. The process by which an individual arrives at this point is a subject for future studies. Ideally, these would be longitudinal. The *Pseudogenerative* prototypes may provide one means of transition into generativity, as a struggle to balance personal growth and needs with those of others, and show the most promise of movement to other statuses. The *Conventional* status may provide a second entry point to generativity. As the early *Conventional* individual's responsibilities to family and career expand, his or her encounters with conflicting views may precipitate a generativity crisis and a reformulation of personal tolerance guidelines. Future studies will need to take into account the distinction between developmental, age-appropriate manifestations of the *Pseudogenerative* and *Conventional*



statuses, and these statuses as final resolutions of the stage.

Further investigation into the validity of the proposed generativity statuses is seen as taking at least three directions. First, more evidence of predictive validity is needed, in ways that elucidate the features of the generativity statuses generally, and in ways that further explore the theoretical distinctions among them. To this end, the remaining NEO domain and facet scales as well as the short version of the Washington Sentence Completion Test, which were also administered during the present study, will be scored and analyzed for convergence with generativity prototypes. A possible avenue to further describe and distinguish the statuses in future research is the investigation of psychosocial processes operating in parental and leadership styles. Second, relationships between prior and subsequent psychosocial stages can be investigated. For example, there should be a positive relationship between the intimacy statuses (Orlofsky, Marcia & Lesser, 1973) and the generativity statuses. In addition, the attainment of generativity should be related to the subsequent stage of integrity. The use of the Generativity Status Measure with adolescents, early adults and older adults in both cross-sectional and longitudinal designs, in conjunction with measures of identity, intimacy, integrity and overall ego development, may be able to build on Ryff and Heincke's (1983) initial efforts to provide discriminant validity for the

salience of generativity in middle adulthood. Finally, parental generativity status might serve as a predictor of the identity status of their adolescent children, and of the industry level of their children at elementary school age.

In summary, the status approach presented here holds promise of providing a meaningful route to the understanding of the adult crisis of generativity vs stagnation, and the interplay of this stage of life with the maturational processes of those younger and older.

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## APPENDIX A

GENERATIVITY STATUS MEASURE

INTERVIEW AND SCORING MANUAL

C            CHERYL BRADLEY 1988

SIMON FRASER UNIVERSITY

DRAFT MANUAL - USE ONLY IN CONSULTATION WITH THE AUTHOR

The writer is indebted to Dr. James E. Marcia, Simon Fraser University, for the general format, and in particular the summary section used in this manual.



## Generativity Status Interview

### General Information

1. Sex?
2. Age?
3. Marital Status?
4. Children? sex/age?
5. Educational background?

### Work:

6. What kind of work do you do/have you done?
7. How do you feel about your work? How important is it in relation to other areas of your life? What do you enjoy about it?
8. How would you describe your relationship with your boss? Your employees? Your coworkers?
9. Do you feel you've accomplished or are on your way to accomplishing your career goals?
10. What are your most valued accomplishments?
11. How do you react when someone questions your authority?

### Community:

12. Are there any social/political issues you feel strongly about? Do you get actively involved?
13. Are you involved in community or volunteer work? If yes, what draws you to that work?
14. What do you think young people today need?

### Family:

15. How would you describe your relationship with your children? What kinds of things do you do with them?  
OR How do you feel about not having any children? Are there any young people you are close to? What kinds of things do you do with them?
16. How do you feel about the direction your children (OR young people you are close to) have chosen? Is it what you would have expected?
17. How do you feel you've influenced their development?
18. How would you describe your relationship with your partner (if married or in a relationship) OR How do you feel about being single? Do you have friends you feel particularly close to? How would you describe this(these) relationships?
19. Are there other relatives/friends who you are particularly involved with or concerned about?

### Personal Concerns:

20. What are your main goals and interests? Are they different from what they were, say, 10 or 20 years ago?

21. Who are the significant people/what are the significant events over the years that have helped shape who you are today?
22. Do you set aside time for yourself? What do you do? How important is that to you?
23. Do you ever experience non-productive periods in your life? If yes, how do you feel about that when it happens?
24. How is your health generally? When you get sick, how do you react?
25. People often talk about 'settling down' as something that happens sometime after the age of thirty. Does this have any meaning for you?

## GENERATIVITY STATUS SCORING MANUAL

The objective of rating each interview is to situate an individual in one of five "generativity statuses", each status being a profile of resolution of the generativity vs stagnation crisis of middle adulthood. The five statuses are: Generative, Pseudogenerative (Agentive and Communal), Conventional, and Stagnant. Generativity is a time when the adult individual is engaged in establishing and guiding the next generation; in its broadest application, generativity encompasses procreativity, creativity and productivity, in a mutually beneficial relationship between the caretaker and that which is cared for.

Statuses are differentiated along the dimensions of vital involvement and tolerance: vital involvement in the growth of children, young adults, coworkers, family, broader community concerns, and one's creative efforts; and a tolerance of individual differences and limitations. These two dimensions, as they relate to self and others, are seen to operate in the areas of work, community, family and personal concerns.

**Vital involvement** is assessed according to the following criteria:

1. **Activated concern.** Is concern for the growth of self/others expressed? Is action taken towards that concern?
2. **Responsibility.** Is there a sense of responsibility for those who may benefit from the individual's skills and knowledge?
3. **Reliability.** Can the person's commitments be counted on? Is there consistency in the words and deeds of the person?

**Tolerance** is assessed according to the following criteria:

1. **Individuality.** Is there allowance for and support of the individual nature of the self and others?
2. **Acceptance of limitations.** Are expectations of self/others realistic? Is there allowance for failure as a growth experience?
3. **Authority.** Is there ability to be authoritative (knowledgeable, experienced), without being authoritarian (restrictive, dogmatic)? Can one accept

another's authority without feeling that one's own is diminished?

4. **Discrimination.** Is one able to make choices knowing that other views/options are/were possible?

## INSTRUCTIONS FOR RATING

The following is a description of the way in which the two dimensions of vital involvement and tolerance are combined to produce a generativity status, with examples of how each status might appear. Statuses are to be viewed as prototypes of resolution of generativity-stagnation; often, individuals will show elements of several statuses.

For the sake of convenience, the masculine pronoun has been used throughout the status descriptions to indicate both male and female genders.

### **Generative**

The Generative individual is characterized by high vital involvement and high tolerance with respect to self and others. He is activated in generative concerns.

#### Work:

He enjoys work, and looks at the challenges it brings as stimulating and rewarding. He is aware of the contributions of others to the accomplishments of goals and encourages them to participate to their full potential. He enjoys the mastery he has acquired in her/his area of specialization, and feels a need to contribute to the growth in mastery of those who work for or with him. He makes allowances for mistakes in himself and others, although he is able to be firm and decisive as the situation warrants. He is comfortable with the vocational choices that have been made, and is able to make further changes if that is necessary or desirable.

#### Examples:

Her personal belief, reflected in her management style, is that the most valuable resource of an organization is the minds of its people. "You have no question that people can think and can develop, and so all the behaviors that you develop within yourself are to live up to that belief." She feels a personal responsibility as a professor to provide a safe environment for students to test their knowledge and skill, and to make sure the successes are theirs. She encourages people to set high expectations and feel the excitement of problem-solving. "Be able to set your goals and still be satisfied if you've given your best shot, even if you don't quite achieve your goals."

He has always enjoyed his work as a chartered accountant. Several years ago he moved from a large firm into public practice so that he could combine his interest in accounting with his desire to help people individually. "In public

practice, I'm allowed to do my accounting work but I'm also helping people, in the sense that I'm advising them and consulting them...my practice is oriented toward people and helping them do well in their business." He views challenges to his authority as an opportunity to learn from others.

He has degrees in engineering and organizational effectiveness. While in university, he was influenced by a professor who was interested in engineering because it could make a difference in people's lives. In his present work as a management consultant, he sees himself as a facilitator, helping people find out more about themselves and giving them the processes that would enable them to freely choose how they want their organization to work. Besides increasing organizational effectiveness, he feels a key aim of management consulting is to improve the quality of life for those working in the organization.

#### Community:

He is aware of his local community and larger issues. He feels a responsibility to contribute to the community, through involvement in professional associations and possibly volunteer work. He may use the skills he has acquired in his professional life when volunteering in the community. He has formed a world view and places political and social opinions within a larger context. He feels a responsibility to his community to help improve the quality of the lives of its inhabitants, and is an active proponent of its development.

#### Examples:

He feels he has a facility for working with people, and has always had an interest in helping people cope with personal problems. For several years he has volunteered with a counselling agency, and it has helped him develop coping skills of his own. He feels that people need continuity, so they can own their own reality, and encouragement to trust their ability to make decisions.

He has been actively involved in politics, using his business skills to help plan campaigns. He also offers his professional services to his church and other volunteer agencies. He actively supports the things he believes in, and will provide professional services free if he feels there's a great need and they cannot afford to pay. Young people need the opportunity and freedom to grow and develop their creativity.

Family:

He takes an active interest in the welfare of his children, or other young people. He perceives his role with his children as one of advisor, but his children's directions are seen as uniquely theirs. He strives to further the development and contentment of each member of the family.

## Examples:

She is single with no children through choice but takes an active interest in the children of her sister. She views her students as her family, and is available to them for personal advice beyond academic concerns. She encourages them to take risks, develop their potential, and turn failures into growth opportunities. She is in close contact with her parents, now elderly; they plan to move in with her when they are no longer able to live alone.

He feels it is his responsibility, as the adult, to nurture and protect the connection with his children, and to make that a fruitful connection for them. While he has some concerns over his son's chosen direction, he is supportive: "I encourage him in whatever he's doing, and I'm there if he wants to talk about things...I want to make them really feel free, within a continuity and a structure of boundaries so they know what to expect." Although single now, he would rather be with someone, and is looking forward to building a long-term relationship.

Personal Concerns:

He takes time for himself, and this is important to him. He takes care of his health, and when sick slows down to accommodate his illness. Personal growth is a priority.

## Examples:

Her life philosophy, as reflected in her work and dealings with people, is to always do the best she can and bring out the potential she feels is important to her. She likes to test herself, and gets feelings of success from having tried, even if she doesn't quite reach her goal. She sets aside time for herself and for friends each week, despite her busy schedule.

Although in his youth he felt a strong need to prove himself, he now feels satisfied with his accomplishments and lifestyle, and wishes to "have rich, healthy, and active senior years". He sees all his activities as homogenous and equally important to him - work, athletics, social life, personal life. He was quite ill for two years recently and

feels it's important to roll with these periods: "if you traumatize yourself over them, it's going to make them worse". Settling down, for him, means a lessening in activity levels but not in terms of challenges and things to do.

His goals are less specific now than when he was building a nest for his family; they revolve around continuing personal development, through meditation and involvement with his church, and passing on what he can learn to others. He considers times of external non-productivity as growth periods. He feels his life is congruent: his work and his personal life are ways for him to clarify and practise his values. His wife has been instrumental in helping him define his values.

#### General Comments:

The Generative individual displays consistency between stated beliefs and goals, and action towards those beliefs and goals. There is a feeling of balance between self-care and other-care, and a cohesiveness to his life. The Generative individual is motivated to assist others, and includes others in his responses.

#### **Pseudogenerative**

Pseudogenerative is characterized by mixtures, within a criterion, of high and low for self and others; high vital involvement/tolerance, either in self or other, but generally not in both. There are two types of Pseudogenerative: Agentic and Communal. Most frequently, they come across as two styles of being self-absorbed; one with his own external goals and things; one with other people and his need to be needed by them. Recognition is important to both orientations.

#### **Pseudogenerative-Agentic**

Pseudogenerative-Agentic is characterized by high vital involvement in self as self related to the world: an identification of oneself with one's personal goals and achievements. Agentic is very productive but he may be spread too thin, or have too concentrated a focus to reliably guide others. He may see others as peripheral to his own concerns and therefore uninteresting. Tolerance of limitations or impediments to personal goals may be lacking; he tends to perceive others as either contributing to or obstructing his path.



Work:

He is very busy, and may have a position of some responsibility. He seems to be constantly striving to meet deadlines, or maximize his output. He may have minimal contact with the people he deals with beyond work-related concerns.

## Examples:

He devotes most of his energy to work and encourages those around him to do the same, applying the same standards to his staff or coworkers as he does to himself. He is unable to provide reliable leadership as he is trying to do too much at once. He acknowledges that he sometimes proceeds too fast for the organization and its people. Others are not truly involved in the decision-making process.

He finds his work a major source of stimulation. He describes the business of selling in terms of a conflict of interests; he needs to sell you something you may not want, and yet he also wants to maintain a level of professional integrity. Coworkers are people he relies on to help eliminate or reduce problems and maintain stability: "Everyone in this office is here to support what I do, and each has a different area".

Community:

There is little time for community activities or volunteer work. He may serve in a leadership capacity on several professional committees. His contact with community leaders is frequently made with the idea that they may be useful to him at some later date.

## Examples:

He sees community work as an extension of his sphere of influence and has held several positions of leadership simultaneously. He makes charitable donations to organizations he would like to see affiliated with his business. Guidance provided young people is almost exclusively work-related.

Family:

In the area of family concerns, the Pseudogenerative-Agentive may look similar to Conventional, in the desire to imbue the children with his own values and directions. The main difference will be either an isolation from the children, or difficulty perceiving family members' choices and desires as separate from his own.

**Examples:**

He cites family as a priority but has little free time to spend with them. Family is appreciated as it supports his work; he involves all of them in the pursuit of personal goals, which have become family goals. A year ago he decided that his last chance at becoming wealthy lay in the European market, and he sent his nineteen year old son to open an office in England, against the wishes of the rest of the family. Kids need time to learn how to do things: "at first they slow you down, but eventually they're a help".

**Personal Concerns:**

There is a strong sense of purpose and commitment to personal goals; these may be the same as work goals. It is often extremely difficult for the person to "take care of himself".

**Examples:**

He has no time for exercise, and meals are often eaten on the run. Leisure takes a distant place in his priorities. He is thinking of slowing down, to conserve energy for future achievements. He feels an inner pressure to accomplish his goals, which are always replaced by more goals.

He feels he has "always been looking for the Holy Grail". A few years ago he decided to build a homestead in the bush, and worked so hard on it that he became very ill and had to be hospitalized. He claims to be a "terribly patient", and "gets so mad I get well real fast". When he realized the homestead was a three generation project, he gave up because he wouldn't be around to see it.

**General Comments:**

The Pseudogenerative-Agentive may look Generative; he is likely to be a high achiever, and feels a sense of responsibility for leadership. Despite the appearance of involvement in others or in a "greater good", he will seem either cut off from them in some meaningful way, or they will appear to be seen as extensions of himself.

**Pseudogenerative-Communal**

Pseudogenerative-Communal seems highly involved in other people; however, this is frequently expressed in terms of the self, as a need to be needed or indispensable to those around him. He does not foster others' independence from him. Approval is important to him.

Work:

He may claim that work is a priority for him, but may not seem motivated to reach career goals. He may downplay his contributions in false modesty, or claim his contributions are indispensable to those he works with. He may feel uncertain in positions of authority, and anxious with disagreements.

## Examples:

She has done a lot of different jobs, mainly working as a writer/editor. She edits the theses of foreign graduate students, and claims that they couldn't publish without her help with their writing. She often feels people don't really appreciate having their work changed, and this bothers her. "You are performing a service and a function that is not always appreciated as much as you would wish it to be...except my boss, who loves everything I do and any suggestions I make are just great". She'd like to be a writer or university professor but doesn't feel she has the motivation or the stamina for it.

She has difficulty in her relationship with her boss of five years: "I love him, but I can never please him, and he's the ultimate judge of my performance appraisals...I'm working out a lot of my abandonment issues with him". She sees herself as working with people, in whatever capacity is needed: "I'm to work with large numbers of people; the form and place will be determined by what is needed". Disagreements make her feel vulnerable: "I have incredible knowledge of what I do but I still undermine it by feelings of insecurity and powerlessness, particularly when disputes arise".

Community:

He sees himself as a contributing member of the community. Although charitable in actions, motivation for helping behavior is vague, or on occasion at cross-purposes to the welfare of those assisted.

## Examples:

She sees herself as a mentor to young people because they rely on her, although she finds helping them sometimes exhausting or inconvenient. Over the years she and her husband have taken several people into their home for extended periods because they had no other place to go. She does this because she feels sorry for them and she can never say no. She is involved with a civil liberties organization and edits pamphlets for them. She would like to see a just

society, although she is not sure how this could be accomplished.

He describes himself as a socialist "although I don't have much to gain from that system, as I tend to put in more than I get out". Given the nature of his counselling practice, he feels he doesn't "owe society any more, as my work is what most people do for volunteer work". He is proud of his role as a resource person for members of his community: "if someone wants to call the Premier person-to-person, they come to me".

#### Family:

Family is described as close-knit; children may be discussed in terms of how much they need the family for their sense of emotional well-being. He does not facilitate the children's independence from him.

#### Examples:

She describes her family as very close, with the family as the focal point of her adult children's lives. "A lot of people have said to me, your family is almost forbidding to outsiders because we seem so self-sufficient and exclusive in a way". Having just experienced a period of marital difficulty, she says she's trying to be a better wife.

She describes her relationship with her thirteen year old son as "very spiritually close - he's almost too enmeshed with me". She sees a lot of herself in him, and it's "hard for me to let him be different". She sees him as particularly gifted and fragile, in need of special attention: "he's chosen such a difficult task, school's been so difficult, but he's extremely bright...he's got skills the other kids haven't even touched". She expresses concern over his "addiction to sugar", which she sees as potential for alcoholism.

#### Personal Concerns:

Personal time and relaxation may seem important to him, although other duties frequently interfere. Approach to personal development may seem inauthentic in some way, or geared to trends of the moment.

#### Examples:

Her private time is very important to her: "I'm totally self-indulgent". She reads, likes classical music, gourmet cooking. Although she says self-development is important to her, it is hard to see exactly what she means or how she is

accomplishing that. She keeps fit, and is concerned about the physical signs of getting older, although "my husband doesn't seem to mind". She wonders if she will ever get down to writing - feels she lacks a career that would define her by a professional title.

#### General Comments:

The Pseudogenerative-Communal individual may profess altruistic motivations yet he appears to have a great need to be needed by others, and to obtain their approval. He seems unwilling, in some meaningful way, to provide others with the skills they need to be independent of him.

#### **Conventional**

Conventional is characterized by high vital involvement and low to moderate tolerance with respect to self and others.

#### Work:

Conventional takes pride in his work and in what he has been able to accomplish through the workplace. Work is largely viewed as a way of being responsible, and seen in terms of the security it brings to him and his family. Control is important to him; there is a certain unease or rigidity around confrontations with someone in a position of authority, or having his authority questioned.

#### Examples:

She feels she has worked hard for the advances she has made in her work, and strives to be prepared for most eventualities. She likes the security of her full-time position with an established company, although she is also thinking of creating a business of her own: "If I wasn't so concerned about finances and making sure everything's safe, I would really love to do some freelance work and give seminars".

She got into real estate originally as a way of getting out of the house but still having hours she could juggle to be available to the children. She enjoys the work and the people, although it is not all-consuming. She feels she is quite knowledgeable, and as such does not appreciate it when someone questions her authority.

Although he takes pride in his accomplishments over his extensive career as an insurance agent, the work itself is secondary to what it generates in terms of security, a pension, and financial independence, which he feels must be everyone's ultimate career goal. He sees himself as

authoritative "in the sense that I know in a very confident way what's right and what's wrong and what needs to be done".

### Community:

He takes an active role in the community, particularly in issues seen as most relevant to himself, his family, or a subculture to which he belongs. There is likely to be low tolerance or understanding of groups, individuals, or ideas dissimilar to his own, and a concern that events follow an established and predictable path.

### Examples:

She has strong feelings about what should be taught in schools, and was displeased when a suicide prevention seminar was given in her daughter's school without asking parental consent. She does volunteer work with a speaker's bureau and has been actively involved in a variety of charitable organizations over the years. "Young people today need moral support. They need trust so people won't accuse them of doing the wrong things immediately - oh, it must be them because they're young."

A friend got him involved on the board of a volunteer organization connected with their religion five years ago. Since that time he has taken over the presidency of the board and finds his involvement very satisfying, although he hadn't sought this community work: "I had to be nudged but I was willing to go". Young people need strong parental guidance to equip them with the ability to handle what's in store for them in the future, and to instill a strong value system: "It's all done by the age of nine or ten, and it's just refinement after that".

She has strong political views, and has little empathy for people on welfare, except those who really need it: "It's not necessary to play the system. I don't like lazy people who feel the world owes them a living". She is a founding member of an organization which raises funds for special olympics and other worthy groups: "I wanted to help people who needed help more than I did". Young people need a strong family structure: "They're a good group, just a few that are off the track with drugs".

### Family:

Family is a high priority, and there is a high level of commitment to child-rearing. Relationships with children are characterized by rules and behavioral expectations. Relations with spouse tend to be role-bound. Children are

expected to embrace his values. The Conventional individual would likely be somewhat uncomprehending to find his progeny departing from his time-tested ways.

Examples:

She made the decision to cut back at work to spend more time with her adolescent daughter. She is proud of the very high moral standards she has conveyed to her daughter, who she describes as very responsible, and not into drugs or premarital sex. Friction between them must be resolved immediately: "I never allow her to go to bed or leave the house if I'm annoyed with her or we're annoyed with each other".

He describes his relationship with his children as honest and open, and smooth except for a rocky period when his daughter was an adolescent: "Our daughter never gave us a day's trouble until she was sixteen, and then she was just rotten for two to three years after that. We had one simple rule - just be reasonably pleasant, and if you can't live by that rule, then get out". Now, he says, "our kids are the kind of people we really wanted and expected". He describes his wife as the communicator of the family, and the children confide totally in her.

She doesn't believe in pushing her children toward any particular career, but she insisted they take bookkeeping and typing so they would have skills to fall back on. Each year her daughters choose an activity, such as skiing, but once they've chosen they have to finish the year: "If you allow children to quit, they become quitters for the rest of their lives". She feels she has good communication with her daughters, and they have an understanding of each others' needs. She feels the "hard and fast rules" by which she raised them have helped them to be responsible members of society.

Personal Concerns:

He takes care of himself when this becomes necessary; however, he does not believe in "coddling" himself and may be frustrated by feelings of loss of control when sick. His main goals revolve around setting up a secure financial basis for his senior years.

Examples:

She lives by her mother's advice, which she passes on to her daughter: "Do what you can today, and get that out of the way. And tomorrow do what you can do". She enjoys spending time on the phone with friends, watching TV, reading the

newspaper. When she's sick, she still likes to go to work unless she's too dizzy to drive. "If you think you're sick, it won't take you long to convince yourself that you can stay home".

Her interests have not changed from her youth: she likes the outdoors, and spending time with family and friends, particularly other single mothers, as "we're a breed of survivors". She gets frustrated by non-productive periods, and says she "doesn't have time for illness". She'd like to get ahead now so she doesn't have to work for the next twenty years.

His personal goals focus around becoming financially independent, and he feels he plans more for the long term now than he did in his twenties. He enjoys solving mechanical problems, long bike rides, and family occasions. He doesn't get sick, generally, but when something is wrong physically: "it bothers me that I can't control it". He sees himself as more settled than before, although he feels he's never gone through a period of not being settled.

#### General Comments:

The Conventional individual is primarily role-bound or culture-bound, and is most concerned about taking care of "his own kind". He has internalized relatively inflexible criteria by which he measures appropriate child-rearing practices and occupational goals, and tends to assume that others espouse or ought to espouse his set of values. He is the keeper of tradition and the status quo. Security and control are likely important to him.

#### **Stagnant**

The Stagnant individual is characterized by low vital involvement and, generally, low tolerance with respect to self and others. He may exhibit high tolerance; however, this will be in the form of a laissez-faire attitude rather than a thought-out position. There is a feeling of little movement, little give to the world or satisfaction with oneself.

#### Work:

If he is working, there is little investment of personal energy in the work, coworkers or staff. Work may be "busywork", to fill time, or work in which no real joy is taken.



### Examples:

He owned his own business for years, sold it five years ago, and "hasn't done much since". He's taken up acting - he'll give it a year trial and then, "if it's indicated I should go on, I will; if not, I'll wind it down". While in business, he felt the making and acquiring of money was most important to him, as a way of keeping score, a measurement of where he fit in the social scheme of things. He no longer feels this way, but is vague about what has replaced it in importance.

Her job is "near the bottom of priorities", and has pretty much always been that way. She feels she's "not on my way to accomplishing my career goals", although she's hoping to teach Yoga in her basement "some day". She wishes she had approached her career differently: "If I'd known what was going to happen to my life, I would have gone into business machines". She doesn't see herself as having or exercising any authority: "I don't tell anyone what to do".

He is a teacher, because "after 15 years, it's hard to go into anything else". He finds teaching a solitary profession. He could stay on in his present job for 20 years with no advancement: "It isn't leading anywhere, and while there are little niggles of discontent that will have built up and need some attention down the road, I don't plan a change in the foreseeable future". When his authority is questioned, he becomes tense and angry, although he rarely displays his feelings.

### Community:

He is not interested in politics or social movements, except perhaps to voice his discontent with the way things are managed. He does not feel a responsibility to take any action or to promote the growth or well-being of the community.

### Examples:

He does community work in the form of a self-help group of which he is a member. He's concerned about the environment but feels that "someone in a better position than I could influence". He thinks young people are indulged too much, that they are generally of the opinion: "we don't have a long time here, so who cares?"

Although he has never been involved in political or social issues, he "guesses" he has strong feelings about some, such as the environment. He does no volunteer or community work,

and "hasn't ever thought about what young people might need", although he is a college teacher by profession.

### Family:

There is a sense of isolation from the family. Family activities are likely to be those of the Stagnant individual's preference, or he may simply "go along" with what's happening. He may be unsupportive or indifferent to children's choices and directions.

### Examples:

He gets along better with his children now than before, and better at a distance than in person. He is not happy with what he's been able to do as a father. He refers to his 23 year old son as if he were still a child: "I take my boy fishing". He sees his son as a bum for doing manual labour, but is trying to be more respectful of his choices.

She seems at a loss to describe her relationship with her children: "I really don't know how to describe our relationship...disappointing, heartbreaking at times, definitely a sore point in my life". While married, her whole life centred around her kids and her husband. Single now, she is without much optimism for future relationships, and is bitter about her marriage: "I'm mad at myself for not seeing things in my marriage, for putting up with things". She sometimes babysits for her daughter, or "whatever else they ask me to do".

### Personal Concerns:

Stagnant comes across as lethargic, and may be apathetic about taking care of himself. He tends to dwell on the past, often with regrets. Personal values and philosophy may be expressed, but in vague terms with little indication of how they would be translated into action.

### Examples:

He is trying to find "peace of heart and serenity", which have escaped him to present: "Everyday life must go on, regardless of what it might be, joy, sorrow - but misery is an option". He refers repeatedly to the negatives in his life and how they have impacted him. He has a bad back which has curtailed his activities somewhat; he continues to motorcycle despite the fact that this makes his back much worse. He is resentful of social conventions or the thought of slowing down: "life is a one shot deal".

His goal this year is "more music and love", qualities that have been lacking in his life. He says that it's painful to look at things which have been in the back of his mind for so long, and which he has not acted on: "I was going along a dull route, why wasn't I going for the things I wanted?" Pressure helps him overcome non-productive periods. Although he describes settling down with a house, family and fixed place as "stifling", he reflects that he is indeed settled.

She wants to get back into sports and "laugh again", and would "like to have time to learn things and not be tired". She has been through a serious car accident, and is disturbed that she's put on 10 lbs while on bedrest. When sick, she is quiet: "I just accept it". She has been influenced by "good books, good people, good thinking", and prizes being "really content" although she doesn't sound it.

#### General Comments:

Stagnant is inactivated in generative concerns. There is a pervasive sense of impotence in his life, and inconsistency or contradictions in responses, particularly in statements of well-being, which often sound cliché. Others figure only peripherally.

#### Summary

Four main areas are covered in rating the interviews: work, community, family and personal concerns. Each is assessed according to the dimensions of vital involvement and tolerance. Individuals are assigned to one of the five categories of generativity for each of the four areas, and scored on a 9-point scale for each generativity prototype.

An interview rating sheet is included on the last page of the manual, as a sample of how to complete the rating.

There are no rigid criteria for combining the four areas to yield an overall generativity status or overall dimensional ratings. Many times a rater will get a general impression from the interview that would not strictly coincide with an arithmetic sum of the four areas; these "hunches" are valuable and should not be abandoned for the sake of false rigor. Of course, in most cases, the final generativity status will directly reflect the sum of the ratings of the areas. It should be clear that clinical judgement is to be exercised, not suspended.

Participant # \_\_\_\_\_

## GENERATIVITY STATUS INTERVIEW RATING SHEET

Work:

|                  |          |   |   |   |   |   |   |   |   |   |
|------------------|----------|---|---|---|---|---|---|---|---|---|
| Generative       |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Agentic  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Communal | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Conventional     |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Stagnant         |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Community:

|                  |          |   |   |   |   |   |   |   |   |   |
|------------------|----------|---|---|---|---|---|---|---|---|---|
| Generative       |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Agentic  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Communal | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Conventional     |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Stagnant         |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Family:

|                  |          |   |   |   |   |   |   |   |   |   |
|------------------|----------|---|---|---|---|---|---|---|---|---|
| Generative       |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Agentic  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Communal | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Conventional     |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Stagnant         |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Personal:

|                  |          |   |   |   |   |   |   |   |   |   |
|------------------|----------|---|---|---|---|---|---|---|---|---|
| Generative       |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Agentic  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Communal | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Conventional     |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Stagnant         |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Overall Rating:

|                  |          |   |   |   |   |   |   |   |   |   |
|------------------|----------|---|---|---|---|---|---|---|---|---|
| Generative       |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Agentic  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Pseudogenerative | Communal | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Conventional     |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| Stagnant         |          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Overall Status Rating: \_\_\_\_\_

This rating should be based on your global sense of where this person sits in the generativity-stagnation crisis, and may or may not be identical to your dimensional ratings of the individual. Clinical judgment is to be exercised, not withheld.

Comments:

\*Use this space for note-taking and demurrers\*

## APPENDIX B

## The Loyola Generativity Scale

Instructions: The following questions are presented in the form of statements. We would like you to indicate how often each of these statements applies to you.

Circle "N" if the statement never applies to you.

Circle "S" if the statement only occasionally or seldom applies to you.

Circle "FO" if the statement applies to you fairly often.

Circle "VO" if the statement applies to you very often.

- 
1. I try to pass along the knowledge I have gained through my experiences.
  2. \*I do not feel that other people need me.
  3. I think I would like the work of a teacher.
  4. I feel as though I have made a difference to many people.
  5. \*I do not volunteer to work for a charity.
  6. I have made and created things that have had an impact on other people.
  7. I try to be creative in most things that I do.
  8. I think that I will be remembered for a long time after I die.
  9. \*I believe that society cannot be responsible for providing food and shelter for all homeless people.
  10. Others would say that I have made unique contributions to society.
  11. If I were unable to have children of my own, I would like to adopt children.

12. I have important skills that I try to teach others.
13. \*I feel that I have done nothing that will survive after I die.
14. \*In general, my actions do not have a positive effect on others.
15. \*I feel as though I have done nothing of worth to contribute to others.
16. I have made many commitments to many different kinds of people, groups and activities in my life.
17. Other people say that I am a very productive person.
18. I have a responsibility to improve the neighborhood in which I live.
19. People come to me for advice.
20. I feel as though my contributions will exist after I die.

---

Scoring procedure:

|              |   |   |
|--------------|---|---|
| Very often   | = | 3 |
| Fairly often | = | 2 |
| Seldom       | = | 1 |
| Never        | = | 0 |

\* Indicates reversed scoring.

## APPENDIX C

## The Ochse and Plug Erikson Scale

Instructions: The following questions are presented in the form of statements. We would like you to indicate how often each of these statements applies to you.

Circle "N" if the statement never applies to you.

Circle "S" if the statement only occasionally or seldom applies to you.

Circle "FO" if the statement applies to you fairly often.

Circle "VO" if the statement applies to you very often.

---

Subscale 1: Trust vs Mistrust

1. \*I feel pessimistic about the future of mankind.
11. I feel I will achieve what I want in life.
21. \*When I am looking forward to an event, I expect something to go wrong and spoil it.
31. \*I feel people distrust me.
41. I feel the world's major problems can be solved.
51. \*I feel low spirited (depressed).
61. I am filled with admiration for mankind.
71. \*I feel there is something lacking in my life.
81. People can be trusted.
91. I feel optimistic about my future.

Subscale 2: Autonomy vs Shame and Doubt

2. \*I have a feeling that I would like to "sink through the floor" or become invisible to those around me.

- 12. When people try to persuade me to do something I don't want to, I refuse.
- 22. \*After I have made a decision I feel I have made a mistake.
- 32. \*I am unnecessarily apologetic.
- 42. \*I feel someone will find out something bad about me.
- 52. \*I worry that my friends will find fault with me.
- 62. \*I feel frustrated if my daily routine is disturbed.
- 82. When I disagree with someone I tell them.

Subscale 3: Initiative vs Guilt

- 4. \*I feel guilty when I am enjoying myself.
- 14. I am prepared to take a risk to get what I want.
- 24. \*I feel hesitant to try out a new way of doing something.
- 34. When I compete with others I try hard to win.
- 44. I am confident in carrying out my plans to a successful conclusion.
- 54. I am curious or inquisitive.
- 64. I make exciting plans for the future.
- 74. I feel what happens to me is the result of what I have done.
- 77. \*When I have difficulty in getting something right, I give up.
- 84. I enjoy competing.

Subscale 4: Industry vs Inferiority

- 5. I make the best of my abilities.
- 15. \*When people look at something I have done, I feel embarrassed by the thought that they could have done it better.
- 25. \*I lack the energy to get started on something I intended to do.



- 35. I get a great deal of pleasure from working.
- 45. \*I lose interest in something and leave it unfinished.
- 55. \*I feel too incompetent to do what I would really like to do in life.
- 65. I feel the thrill of doing something really well.
- 75. \*I avoid doing something difficult because I feel I would fail.
- 72. \*People think I am lazy.
- 85. I feel competent.
- 89. I have a sense of accomplishment.

Subscale 5: Identity vs Identity Diffusion

- 6. \*I wonder what sort of person I really am.
- 10. \*People seem to change their opinion of me.
- 16. I feel certain about what I should do with my life.
- 20. \*I feel uncertain as to whether something is morally right or wrong.
- 26. Most people seem to agree about what sort of person I am.
- 30. I feel my way of life suits me.
- 36. My worth is recognized by others.
- 40. \*I feel freer to be my real self when I am away from those who know me very well.
- 46. \*I feel that what I am doing in life is not really worthwhile.
- 50. I feel I fit in well in the community in which I live.
- 56. I feel proud to be the sort of person I am.
- 60. \*People seem to see me very differently from the way I see myself.
- 66. \*I feel left out.
- 70. \*People seem to disapprove of me.

- 76. \*I change my ideas about what I want from life.
- 80. \*I am unsure as to how people feel about me.
- 86. \*My feelings about myself change.
- 90. \*I feel I am putting on an act or doing something for effect.
- 93. I feel proud to be a member of the society in which I live.

Subscale 6: Intimacy vs Isolation

- 7. \*I feel that no-one has ever known the real me.
- 17. I have a feeling of complete "togetherness" with someone.
- 27. \*I feel it is better to remain free than to become committed to marriage for life.
- 37. I share my private thoughts with someone.
- 47. \*I feel as though I am alone in the world.
- 57. Someone shares my joys and sorrows.
- 67. \*I feel nobody really cares about me.
- 87. \*I feel embarrassed when people tell me about their personal problems.

Subscale 7: Generativity vs Stagnation

- 8. \*I feel that, in the long run, children are more a burden than a pleasure.
- 18. \*Young people forget what one has done for them.
- 28. \*I feel that I have done nothing that will survive after I die.
- 38. I help people to improve themselves.
- 48. I enjoy caring for young children.
- 58. \*I feel my life is being wasted.
- 68. I enjoy guiding young people.

78. I have a good influence on people.  
88. I do something of lasting value.  
92. \*I take great care of myself.
- 

Scoring procedure:

|              |   |   |
|--------------|---|---|
| Very often   | = | 3 |
| Fairly often | = | 2 |
| Seldom       | = | 1 |
| Never        | = | 0 |

\* Indicates reversed scoring.

## APPENDIX D

## NEO-PI: Openness to Experience

For each statement below circle the response to the right which best represents your opinion.

Circle "SD" if you strongly disagree or the statement is definitely false.

Circle "D" if you disagree or the statement is mostly false.

Circle "N" if you are neutral on the statement, you cannot decide, or the statement is about equally true and false.

Circle "A" if you agree or the statement is mostly true.

Circle "SA" if you strongly agree or believe that a statement is definitely true.

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Facet Scale I: Fantasy

- 2. I have a very active imagination.
- 13. \*I try to keep all my thoughts directed along realistic lines and avoid flights of fantasy.
- 24. I have an active fantasy life.
- 36. \*I don't like to waste my time daydreaming.
- 47. I enjoy concentrating on a fantasy or daydream and exploring all its possibilities, letting it grow and develop.
- 58. \*If I feel my mind starting to drift off into daydreams, I usually get gusy and start concentrating on some work or activity instead.
- 69. \*As a child I rarely enjoyed games of make believe.
- 81. \*I would have difficulty just letting my mind wander without control or guidance.

Facet Scale 2: Aesthetics

6. \*Aesthetic and artistic concerns aren't very important to me.
17. I am sometimes completely absorbed in music I am listening to.
28. \*Watching ballet or modern dance bores me.
39. Certain kinds of music have an endless fascination for me.
51. \*Poetry has little or no effect on me.
62. I am intrigued by the patterns I find in art and nature.
73. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.
84. I enjoy reading poetry that emphasizes feelings and images more than story lines.

Facet Scale 3: Feelings

9. Without strong emotions, life would be uninteresting to me.
21. \*I rarely experience strong emotions.
32. How I feel about things is important to me.
43. \*I find it hard to get in touch with my feelings.
54. I experience a wide range of emotions or feelings.
66. \*I seldom pay much attention to my feelings of the moment.
77. \*I seldom notice the moods or feelings that different environments produce.
88. I find it easy to empathize - to feel myself what others are feeling.

Facet Scale 4: Actions

92. \*I'm pretty set in my ways.
103. I think it's interesting to learn and develop new hobbies.

114. \*I like to follow a strict routine in my work.
126. \*Once I find the right way to do something, I stick to it.
137. I often try new and foreign foods.
148. \*I prefer to spend my time in familiar surroundings.
159. \*On a vacation, I prefer going back to a tried and true spot.
171. \*I follow the same route when I go someplace.

Facet Scale 5: Ideas

96. I often enjoy playing with theories or abstract ideas.
107. I enjoy solving problems or puzzles.
118. I enjoy working on "mind-twister"-type puzzles.
129. \*I find philosophical arguments boring.
141. \*I sometimes lose interest when people talk about very abstract, theoretical matters.
152. \*I have little interest in speculating on the nature of the universe or the human condition.
163. I have a lot of intellectual curiosity.
174. I have a wide range of intellectual interests.

Facet Scale 6: Values

99. \*I believe letting students hear controversial speakers can only confuse and mislead them.
111. I believe that laws and social policies should change to reflect the needs of a changing world.
122. \*I believe we should look to our religious authorities for decisions on moral issues.
133. I believe that the different ideas of right and wrong that people in other societies have may be valid for them.

144. \*I believe that loyalty to one's ideals and principles is more important than "open-mindedness".
156. I consider myself broad-minded and tolerant of other people's lifestyles.
167. \*I think that if people don't know what they believe in by the time they're 25, there's something wrong with them.
178. \*I believe that the "new morality" of permissiveness is no morality at all.
- 

Scoring procedure:

|                   |   |   |
|-------------------|---|---|
| Strongly agree    | = | 4 |
| Agree             | = | 3 |
| Neutral           | = | 2 |
| Disagree          | = | 1 |
| Strongly Disagree | = | 0 |

\* Indicates reversed scoring.