A Longitudinal Study of Personality Development in Older Adults: The Impact of a Volunteer Intervention Program

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Abstract

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This study tested the hypothesis that a volunteer experience would promote ego development for a sample of older adults. Current and non-volunteers were assessed on measures of personality and ego development before and after a 3-month baseline period, after six months of volunteering, and one year after completing their volunteer intervention. In addition, participants' perceptions of their volunteer experiences were assessed at this follow-up.

Repeated measures MANOVA measured the effect of the volunteering experience on ego development and demonstrated that ego development can change as a result of a volunteering intervention for a sample of elderly adults. The results showed that ego development scores for those individuals initially at the conformist or self-aware levels of ego development significantly increased as a result of the volunteer intervention, while ego development scores for those at the conscientious level or above remained stable. Participants' ego development scores did not change during the follow-up. Non-parametric analyses showed that of participants at the self-aware level and below, 49% increased in ego development. In contrast, only 17% of individuals at the conscientious level or above increased in ego development.

The present study supported the hypothesis that volunteering would have an impact on ego development for those at the lower levels of ego development, but not for those at the higher levels. These findings are consistent with previous research that points to a lack of growth in ego development above the self-aware level. This research has theoretical implications for the understanding of personality in older adults as well as of those experiences in adulthood that promote ego development.

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In the last decade, the fields of personality, life-span development and gerontology have come together as personality researchers have realized that a consideration of late adulthood is vital to a complete understanding of personality, and researchers in life-span development are realizing that personality is central to the study of aging.

Does personality change during the adult years? This has been a question of great interest to psychologists since William James (1890/1950) first suggested that personality was "set like plaster" by early adulthood. Questions of stability and change interest both developmental and personality psychologists. Research has focussed on the question of whether personality can change throughout the life-span in general, and in the older years in particular. In 1991, a special issue of the Journal of Gerontology focused on personality among older adults, reflecting the need to integrate models of adult development with personality theory (Shanan, 1991).

Researchers are divided over the extent to which personality remains the same or evolves over the course of adulthood. Some findings suggest that personality changes throughout adulthood, whereas other findings suggest that people reach their upper limit of personality development by the end of adolescence or early adulthood, and then their personality remains stable.

Whether personality is stable or can change throughout the adult life course has theoretical implications for understanding the natural progression of personality as well as for deciding whether efforts to change should be attempted by those with applied interests (Roberts & DelVecchio, 2000).

Overview of Relevant Research

First the current emphasis in the field of personality will be outlined followed by challenges to this perspective. Key long-term longitudinal studies of personality will be reviewed, noting the distinction between normative and experiential change. After a discussion of measurement issues, the focus will turn to an alternate conception of personality, emphasizing ego development, and the utility of this approach and measure for studying life-span change in personality. The relevant research will be highlighted, including short-term interventions that have been conducted that test if the response to such interventions supports this concept of personality. Finally, the need to research contexts relevant to older adults is necessary if personality is to be studied in late adulthood. The particular context of volunteerism is proposed as a relevant context for older adults and the impact of volunteer activity on ego development is studied.

Current Emphasis in the Field of Personality

Currently, the emphasis in the field of personality in adulthood is on a model of stability, inspired in part by James (1890/1950). This view emphasizes that personality develops during childhood and adolescence and then remains stable (Costa & McCrae, 1988). This position is substantiated by research that supports the stability of personality during adulthood.

Most researchers who emphasize stability also study traits. The prevalent trait model of personality is the five factor model which postulates that five dimensions comprise the main components of adult personality. Costa and McCrae's (1980) NEO Five Factor model of personality assumes that the domains of neuroticism, extraversion,

openness to experience, agreeableness, and conscientiousness encompass most of the variability of personality. Neuroticism contrasts adjustment with emotional instability. Extraversion assesses desire for quantity and intensity of interpersonal interaction, activity level as well as need for stimulation, and capacity for joy. Openness assesses proactive seeking and appreciation of experience for its own sake. Agreeableness assesses the quality of one's interpersonal orientation along a continuum from compassion to antagonism. Conscientiousness assesses the individual's degree of organization, persistence, and motivation in goal-directed behaviour.

Individual differences in personality traits are said to be fixed by age 30 and to not change through the adult years as a result of aging or maturation. McCrae and Costa (1990; Costa & McCrae, 1997) provide ample evidence to support their contention that personality is stable throughout adulthood, after age 30. The data they present show that overall, the five dimensions of personality do not change through the adult years. Based on an examination of the rank order consistency of the Big Five trait dimensions over 3 and 6 year periods, Costa & McCrae (1988) concluded that personality traits are significantly stable for people over age 30. This six year longitudinal study of the NEO PI showed correlations ranging from .55 to .87, attesting to the presence of age-related stability in personality and the absence of maturational effects for each of the five dimensions of personality. Self-report measures of personality in adults usually show stability coefficients around .70 for intervals from 3 to 30 years (McCrae & Costa, 1990). By early adulthood, individual differences in traits are stable and development at the level of traits seems to halt. In sum, Costa & McCrae have defined personality in terms of five

broad traits that they believe do not change greatly after age 30 and their research shows impressive rank order stability of personality over time (1993, 1997).

This emphasis on stability has meant that trait theorists have not attempted to study the possibility of change in relation to specific environments throughout adulthood but have concentrated on showing the absence of age-related or maturational changes in personality. Recently, McCrae et al. (1999) found decreases in neuroticism, extraversion and openness, and increases in agreeableness and conscientiousness over adulthood for five cultures. These findings, although challenging their stability premise, further support the contention that personality development is under the influence of intrinsic maturational influences. The latter approach sees personality as guiding individuals to choose contexts rather than as being influenced by life events.

Challenge to the Stability of Personality

The statement that personality is fully developed by age 30 has been challenged and questioned on both conceptual and empirical bases (Field & Millsap, 1991; Haan, Millsap & Hartka, 1986; Helson & Stewart, 1994; Helson & Wink, 1992). Each of these will be addressed in turn.

Life-Span Perspective

The view of stability stands in contrast to the position put forward by theorists such as Erikson (1950, 1959, 1982) and Jung (1931/1969) who regard adulthood as a time of continued psychological growth and development and who proposed that personality continues to develop and change across the life-span. Erikson's theory attributes personality development to both environmental and biological influences throughout the

life-span, and he included an 8th stage of life in his theory of life-span development to describe development in old age.

More recently, attention has been given to research on adult development and aging stemming from the concept of life-span development which emphasizes development as a lifelong process and extends the notion of development beyond youth into mature and later adulthood (Baltes, 1987; Baltes, Reese, & Lipsitt, 1980; Caspi & Roberts, 1999; Magnusson, 1990; Staudinger, Marsiske, & Baltes, 1995). Life-span development theories hold that psychological functioning is never fixed at a certain age. According to the life-span perspective, during the adult years, men and women make changes in their commitments and face challenges. Change is possible throughout the life cycle and the study of change should not be limited to childhood. This approach to understanding the self is especially relevant given the variety of rich experiences encountered by older adults. Such changes and experiences may affect personality. The issue of stability and change in personality among older adults has captured the attention of researchers as the issue of continuity in life-span development has gained increasing attention (Shanan, 1991).

Empirical Studies

Personality development in the later years has become an active area of research, and the idea that personality develops throughout the life-span has become more widely accepted in recent years. Reflecting the conceptualization of personality as a developmental phenomenon, many researchers have been using longitudinal studies for investigating continuity and change in later life personality. Personality development

among older adults could be systematically studied only when the findings of longitudinal studies were extended into later adulthood (Field, 1991), and a number of researchers have since taken a longitudinal view of personality.

Consistent with the theoretical propositions of the life-span perspective, and in contrast to the findings of stability, there is a reliable body of evidence suggesting that personality continues to develop throughout adulthood, challenging claims of dominant stability. Several studies have found a considerable number of changes occurring in personality during adulthood, after age 30. Overall, the evidence indicates that personality does not stop developing in early adulthood.

In the theoretical and empirical literature, a distinction is made between maturational change and experiential change. Maturational change refers to age-related, intrinsic, biologically based or normative change. Experiential change is due to environmental influences. Experiential change can be observed over a long-term longitudinal study, or after the impact of direct experience when it is observed in response to a specific short-term intervention. In addition, generally stability is studied as either rank-order or mean level stability. That is, either correlations or tests of means have been used to assess the stability or change in adult personality.

An extensive quantitative review of the rank-order consistency of personality (Roberts & DelVecchio, 2000) found that change is definitely possible in middle and old age. This meta-analysis found that rank-order consistency peaks at age 50, challenging the argument that personality becomes fixed in early adulthood and the stereotype that personality is fixed in old age.

Stevens & Truss (1985) investigated the stability and change of 16 personality traits (measured with the EPPS) over 20 years (from 20-40 years of age). Combining rank-order and mean-level analyses, they found both maturational and experiential change. Some traits showed longitudinal stability, some showed longitudinal increases, while others decreased over time. Specifically, maturational (normative) increases were found for achievement, autonomy, and dominance and maturational decreases for affiliation and abasement. Deference, order, exhibition, succorance, and endurance remained unchanged over 20 years. The remaining traits (intraception, nurturance, change, heterosexuality, aggression) showed variable change due to different life experiences, suggesting these aspects may be more receptive to the effects of the environment, rather than to maturational effects. Overall, these findings challenge the proposition of long-term stability.

Haan et al. (1986), in the longest running study of development, adopted a truly life-span view. They studied participants of the Berkeley and Oakland studies and measured personality (based on Q-sort descriptions) at seven points during the life-span (early and late childhood, early and late adolescence, and early, middle and later adulthood). They found both personality stability and change throughout the life-span. In contrast to proponents of greater stability in older adulthood, Haan et al. found that it was childhood and adolescence that were the times of greatest stability while adulthood was the time of greatest personality change. They suggest that cognitive and physical development may be more unique to childhood while personality development may be more unique to adulthood. Some personality components seem to be more variable during

the adult years (self-confidence, warmth, assertiveness) while others seem to be more stable (cognitively committed, dependable, outgoing). The authors conclude that the variability on the 3 dimensions that showed change is due to impact of life experiences.

A 22-year longitudinal study of psychosocial development in adulthood (ages 20-42), using the Inventory of Psychosocial Development, also provides evidence of considerable personality change (Whitbourne, Zuschlag, Elliot, & Waterman, 1992). The results from this study suggest that there are both maturational and environmental effects on personality development. These results challenge the notion of stability in adult personality and add to other research demonstrating personality changes in adulthood.

One longitudinal study of elderly adults found evidence of personality development even in advanced old age among surviving participants from the Berkeley Older Generation Study (Field & Millsap, 1991). Using observer-based rather than self-report ratings, this 14-year longitudinal study of older adults showed that both stability and change characterize personality development. The results revealed rank-order stability in four of the five traits studied (intellect/openness, agreeableness, satisfaction/neuroticism, and extraversion). In addition, mean-level changes emerged for agreeableness and extraversion. The results revealed a mean-level increase for agreeableness (for the "old-old", aged 74-84), showing that even in advanced old age, there is developmental change. They also found a normative mean decline in extraversion as well as relative stability in neuroticism and openness for the group as a whole.

Helson and colleagues have contributed to the research with longitudinal studies

of women's personality development during adulthood. The Mills longitudinal study demonstrated normative personality stability and change between the ages of 21 and 43 (Helson & Moane, 1987) and between the ages of 43 and 52 (Helson & Wink, 1992). Specifically, this program of research found longitudinal rank order stability and mean level normative change on the CPI. Helson & Moane (1987) found normative increases in self-control, tolerance, psychological mindedness, and femininity and decreases in socialization from ages 21 to 27, then increases on dominance, independence, communality and psychological mindedness and decreases on responsibility, flexibility, and femininity (i.e., attitudes of sympathy and altruism, but with feelings of vulnerability and inadequacy) from ages 27 to 43.

Helson & Wink (1992) found decreases in femininity, and increases in responsibility, self-control, good impression (responsive to others, approachable, able to obtain cooperation), and the norm-favouring vector scale (conscientiousness, conventionality) from ages 43 to 52. No mean-level changes emerged on social poise/assurance and achievement potential. Interestingly, none of these changes in personality could be attributed to the life changes of menopause, departure of children, or caring for parents, confirming the authors' claim that the observed changes are normative rather than experiential. These studies support the view that personality continues to change in adulthood.

Helson and colleagues have also examined how different life paths or contexts chosen during early adulthood are associated with patterns of change in middle and late adulthood. Adherence or non-adherence to the social clock is a major source of

personality development in adulthood. Helson and Picano (1990) show that women who became mothers between the ages of 21 and 27 had increased in over-control, responsibility, and tolerance, decreased in confidence and sociability, and had not increased in dominance or independence by age 43, while other groups did not show this pattern.

The Grant study (Vaillant, 1977) contributed with research on a cohort of Harvard men followed longitudinally from 1942 to 1995. Findings from this longitudinal study show increased use of mature defense mechanisms over 40 years.

Summary. In sum, studies showed either maturational (Field & Millsap, 1991; Helson & Moane, 1987; Helson & Wink, 1992) or experiential change (Haan et al., 1986), or both (Stevens & Truss, 1985; Whitbourne et al., 1992), and used self-report inventories (EPPS, Stevens & Truss; CPI, Helson & Moane, Helson & Wink; IPD, Whitbourne et al.), Q-sort (Haan et al.), and observer-based ratings (Field & Millsap). Studies reported both rank-order (Field & Millsap; Haan et al.; Roberts & DelVecchio, 2000), mean-level (Field & Millsap; Helson & Moane; Helson & Wink), and combined analyses (Stevens & Truss; Whitbourne et al.)

To date, long-term longitudinal studies show that both stability and change characterize personality across the life-span, and this change is either maturational or experiential. However, where experiential change is concerned, the influences of specific life events on personality cannot be elucidated for samples followed across such long time periods. There is a need for shorter term longitudinal studies studying change in response to specific life experiences relevant to older adulthood.

Measurement Issues

The theoretical and empirical differences regarding the stability of personality may be due in part to different conceptions and measures of personality. How personality is defined and measured plays a large role in whether it is viewed as stable or malleable (McAdams, 1992, 1994, 1998; Stevens & Truss, 1985; Whitbourne & Weinstock, 1986; Whitbourne et al., 1992).

Those arguing for the stability position usually focus on personality traits that are inherently stable. Methodologically, trait constructs are typically derived from self-report questionnaires. Field (1991) points out that the greatest stability in personality among older adults has been shown in longitudinal research, such as the Normative Aging Study (Costa & McCrae, 1977-78) and the Baltimore Study (McCrae & Costa, 1987), that uses standardized self-report personality inventories.

Helson & Moane (1987) suggest that personality inventories have been developed to measure traits that are insensitive to changes that may occur across the lifetime, making it difficult to relate theories of adult development with the measures and results from these studies. Loevinger (1994) has also criticized this method of personality measurement and argues for the need to use other ways of conceiving of and measuring personality, stating "there is no universal instrument for discovering all about personality" (Loevinger, 1993, p. 14).

Advocates of the changeability of personality across the life-span suggest that when the conception of personality is expanded to include aspects that might be expected to show changes, and personality measurement is not limited to traits, change is more

likely to be found (Helson & Stewart, 1994; McAdams, 1992, 1994, 1998; Whitbourne & Weinstock, 1986). Personality is conceptualized in terms of an experiential self that depends on social roles and relationships that do change over time (Helson, 1993). These views suggest that as we move beyond the trait model of personality, the claim of lifelong stability is challenged. There are life-span developmentalists who are committed to finding or creating change in personality and they have responded to the stability findings by offering alternate conceptions of personality (Loevinger, 1994; McAdams, 1992, 1994, 1998). Consequently, there is a growing variety of alternate approaches to personality theory and research (Loevinger, 1994, McAdams, 1992). The move towards incorporating models of personality that complement the trait paradigm is highlighted by Loevinger's work. Loevinger provided a valuable contribution towards helping theory and research to go beyond trait psychology and to look at personalities as meaningful wholes (Blasi, 1993). Since the 1970's, Loevinger's theory of ego development has been an influential approach to the study of personality development and provides an alternate approach to the trait-oriented method.

Ego Development

The traditional conceptualization of personality is challenged by Loevinger's developmental approach to personality (Hy & Loevinger, 1996; Loevinger, 1976, 1985, 1998; Loevinger & Wessler, 1970). In contrast to the trait or dimensional approach, the stage or developmental approach to the study of personality hypothesizes that personality development processes appear at different stages. Loevinger describes an invariant hierarchical sequence of stages that reflect the individual's perception of the self and the

social world. Loevinger uses the term ego development to describe this aspect of personality and has developed a measure that assesses personality growth, the Washington University Sentence Completion Test of Ego Development (WUSCTED; Hy & Loevinger, 1996; Loevinger, 1985; Loevinger & Wessler, 1970).

Loevinger (1976) states that "the striving to master, to integrate, to make sense of experience is...the essence of the ego" (p. 59). Ego development encompasses the complexity of moral judgment, the nature of interpersonal relations, and the framework within which one perceives oneself and others; development encompasses increasingly complex perceptions of the self and others (Loevinger, 1979b, 1985). This model focuses on transformations in the processes of thinking that account for how the individual makes sense of the world, with higher stages representing more complex, differentiated and flexible thinking. Ego development, also called development of the self or character development, has been referred to as "the unity of personality, individuality, the method of facing problems, opinion about oneself and the problems of life, and the whole attitude toward life" (Loevinger & Wessler, 1970, p.7).

Ego development involves a sequence from egocentric impulsivity to rule-bound conformity to a focus on self-chosen responsibilities to a value for individuality and acceptance of inner conflict (Loevinger & Knoll, 1983). With ego development, the individual becomes more self-aware, tolerant, objective, flexible and autonomous and less impulsive, hedonistic, authoritarian and self-centred. There is a progression from immediate hedonistic consequences of one's actions to a reliance on conventions, to self-defined values (Broughton & Zahaykevich, 1988). This concept involves a progression

towards more flexibility, cognitive complexity, increased tolerance for ambiguity, a more differentiated perception of the self, the social world, and the relations of one's feelings and thoughts to those of others (Bursik, 1995). As individuals develop, their thinking moves from the concrete to the complex and abstract, and they move from stereotyped and dogmatic views towards greater openness to experience, from a desire for certainty to a tolerance of ambiguity and paradox, from other-directed, externally generated standards to self-directed, self-generated standards and from an undifferentiated sense of self to a highly individuated perception of self and others (Bushe & Gibbs, 1990).

Although Loevinger has been criticized for providing a "pointing" rather than a "precise" definition and critics have said her definition is too encompassing and too abstract, she has resisted pressure to be more specific (1979b). A more complete understanding of the concept is provided by a review of her stage descriptions, the roots of ego development, and the relation of ego development with other concepts.

Ego Development: The Stages

Loevinger posits that individuals proceed through the stages of ego development in an invariant hierarchical sequence and posits personality descriptions at different developmental stages. Individuals at the first stage, the impulsive stage, categorize the world into polar opposites such as good or bad, and are demanding, primitive and undifferentiated. At the second stage, the self-protective stage, the individual's main concern is self-protection and staying out of trouble, and the person is wary, complaining, cynical, manipulative, exploitative, and power oriented. At the conformist stage, the third stage, individuals conceptualize the world in a simple manner and classify actions in

absolute terms, and are conventional, moralistic, sentimental, stereotyped, and rule bound. At the fourth stage, the self-aware stage, individuals see multiple possibilities and alternatives in situations, considering what is appropriate for a given situation and are self-critical and aware of interpersonal differences and interactions and of multiple possibilities. At the fifth stage, the conscientious stage, individuals display what Loevinger calls true conceptual complexity. The individual "not only displays complex thinking but also perceives complexity" (Loevinger & Wessler, 1970, p. 76). An example of the higher conceptual complexity at this level is that moral issues are separated from conventional rules; the conscientious person strives to live up to ideals and to improve himself and is responsible, empathetic, psychologically minded, self-respecting, and conceptually complex. At the sixth stage, the individualistic stage, the individual has more complex conceptions, and combines ideas that individuals at lower levels see as alternatives and is truly tolerant, appreciates paradox and irony, is interested in process and is aware of conflicting emotions. At the autonomous (seventh) stage, individuals see conflicting alternatives as aspects of a complex reality and have a high tolerance for ambiguity, and are complex, objective, discriminating, self-realizing, and respecting of others. Finally, at the integrated (eighth) stage, individuals display existential humour, respect others' autonomy, search for self-fulfilment, value justice, oppose prejudice, cope with and reconcile inner conflict, reconcile role conflicts to find identity, and are wise and broadly empathetic. (Above the conscientious level, descriptions are cumulative).

Ego Development: History/Roots

Loevinger's conception of ego development has roots in the concept of interpersonal integration of C. Sullivan, Grant, & Grant (1957) who based their conception on the self-system and interpersonal psychiatry of H. S. Sullivan (1953) and on Piaget (1932). Loevinger's view of the ego or self as a frame of reference for understanding the self and the world, is derived in large part from H. S. Sullivan's (1953) concept of the self-system, which refers to the framework within which people make meaning of their experiences. The model also draws from the work of Piaget (1932) in describing a series of developmental stages that form a hierarchical sequence. The concept of ego development has some conceptual roots in the authoritarian personality research (Browning, 1983; Loevinger, 1962). Loevinger (1976, 1986) cites Kohlberg's (1964) work as one of the many intellectual roots of her theory and says that her construct of ego development incorporates moral development.

Various related concepts have been advanced. Fingarette (1963) defined the ego as the search for meaning; Isaacs (1956) used the term interpersonal relatability; Peck and Havighurst (1960) used the term character development, and Kohlberg (1964) used the term moralization of judgment. Loevinger and Wessler (1970) point out that although all these conceptions differ, they are all "more or less concerned with impulse control and character development, with interpersonal relations, and with cognitive preoccupations, including self-concept" (p.3). Loevinger and Wessler claim their term and construct of ego development encompasses this variety of definitions. However, in spite of the apparent complexity of their construct, at the core of ego development is the "search for

coherent meanings in experience" (p.8).

Despite her use of the term "ego", Loevinger's theory of ego development has little overlap with psychoanalytic theory, and Loevinger uses the term "self" in addition to "ego" to describe her concept (Westen, 1998).

Construct Validity: The Multifaceted Nature of Ego Development.

The organizational function of ego development suggests a multidimensional construct, rather than a unitary dimension. The multifaceted nature of ego development is also reflected in its pattern of relation with other constructs. A better understanding of the concept is provided by an examination of the overlap between ego development and other constructs.

There are theoretically expected relations between ego development and various other constructs, and research suggests that the WUSCTED measures one developmental construct that has multiple relations with various other measures of behaviours, traits, and other developmental constructs. The construct validity of the WUSCTED is demonstrated by the pattern of its relations with other constructs.

Openness to experience. The construct of ego development is theoretically and empirically related to Costa and McCrae's trait construct of openness to experience. McCrae and Costa (1980) found a positive association between ego level and seven of their ten measures of openness to experience. However, the correlations between the 2 constructs are too low to equate them ($r = .13$ to $.27$), suggesting that ego development and openness to experience are only partially overlapping constructs.

Authoritarianism and tolerance. Having authoritarian attitudes, defined as not

being open about beliefs and values, was associated with the lower (self-protective and conformist) levels of ego development (Browning, 1993; McCrae & Costa, 1980). Browning (1983) found a curvilinear relationship between ego development and authoritarianism. Specifically, having authoritarian attitudes was associated with the self-protective and conformist stages, while above the conformist level, all aspects of authoritarianism diminished. Tolerance, defined as being nonjudgmental towards the beliefs and values of others was associated with high levels of ego development (Helson & Roberts, 1994; Lorr & Manning, 1978; M. White, 1985).

Conformity, social competence, compliance. Studies of conformity show a curvilinear relationship with ego development with the highest conformers at the middle levels of ego development, and the individuals reporting the least conformity at the lowest and the highest levels (Hoppe & Loevinger, 1977). Compliance (adherence to convention) was most pronounced at the conformist level (Westenberg & Block, 1993).

Gender roles. Adherence to traditional gender roles is characteristic of the conformist stage and is transcended at higher ego levels. Various studies have found that adults at the higher ego levels behave in ways that do not conform to traditional gender roles. M. White (1985) found a relationship between ego level and leadership potential, a traditionally masculine role. Helson and Roberts (1994) found that women who were at the individualistic level at age 43 had been increasing in achievement and independence since their early 20's. Higher ego levels were associated with having both instrumental and interpersonal goals (McAdams, Ruetzel, & Foley, 1986), and with the integration of nontraditional gender roles (Bursik, 1995). It seems that a hallmark of high ego

development is the transcendence of traditional gender roles.

Mental health, well-being, adjustment. Loevinger argued for the independence of the constructs of ego development and mental health, pointing out that maladjustment can occur at any level of ego development. The psychological mindedness, cognitive complexity, and self-awareness characteristic of individuals at the higher stages may just as much lead to a heightened responsiveness to internal conflict as it may protect against the experience of psychological distress (Pals & John, 1998). "Her model thus defines psychological maturity not as adjustment, happiness, or competence but as personality functioning based on introspection, conceptual complexity and openness, an awareness and appreciation of individuality and conflict, and autonomy and intimacy in relationships" (John, Pals, & Westenberg, 1998, p. 1096).

Studies have found that ego level was not related to neuroticism (McCrae & Costa, 1980), to subjective well-being (McCrae & Costa, 1983) nor to various other indices of mental health (Vaillant & McCullough, 1987). In her study of adaptation to divorce for a sample of women, Bursik (1991) found that ego development and adjustment were not associated. However, M. White (1985) found ego level was positively associated with personal adjustment and well-being for a sample of women.

Interpersonal functioning. There are theoretically meaningful connections between ego development and interpersonal relations, such as increasing social sensitivity, maturity, self-other differentiation, and decreasing self-centredness at the higher stages. The evidence indicates that ego development is associated with higher levels of interpersonal functioning. In general, findings indicate that higher levels of ego

development are associated with greater nurturance, trust, interpersonal sensitivity, valuing of individuality, psychological mindedness, responsibility, and inner control (Hauser, 1993). Ego development is related to nurturance, affiliation, and satisfaction with watching one's children develop (M. White, 1985), with the capacity for interpersonal closeness in young men and women (Westenberg & Block, 1993), with emotional security and intimacy (Helson & Wink, 1987), and with intimacy maturity, especially for women (K. White, Houlihan, Costos, & Speisman, 1990), and with a broad measure of sociometric maturity (other people's impressions of an individual's maturity; Rootes, Moras & Gordon, 1980). Women high in ego level were genuinely concerned about others while also appreciating them as separate and autonomous individuals (Helson & Wink, 1987). The capacity to empathize is related to ego development. Individuals at and above the self-aware level scored higher on empathy than those at lower levels (Carlozzi, Gaa, & Liberman, 1983). These findings support Loevinger's suggestion that the ability to empathize starts to appear with the interpersonal style shown by people beyond the conformist level.

Impulsiveness. Starrett (1983) found that low ego levels are associated with impulsivity while Westenberg and Block (1993) added to these results by showing a curvilinear relationship with ego development. Specifically, impulse control is weakest at the pre-conformist levels, strongest at the conscientious level, and then weakens at the individualistic stage.

Cognitive complexity, creativity. Men who were seen as creative and ideational (Vaillant & McCullough, 1987) and women who were seen as creative (Helson &

Roberts, 1994) tended to be higher in ego level in middle adulthood. McAdams et al. (1986) found that being high in ego development is associated with constructing a more complex life story in narratives, and with greater complexity in an adult's personal plans for the future.

Moral reasoning. Loevinger (1976, 1986) cites Kohlberg's (1964) work as one of the many intellectual roots of her theory and says that her construct of ego development incorporates moral development. Lee & Snarey (1988) provided evidence that ego development and moral development are moderately positively related to each other across the life-span.

Summary. This plethora of studies attests to a multifaceted, complex construct. Some constructs are related linearly with ego development. The higher individuals are on ego development, the more open they are to new ideas, appreciate alternate values and new ideas, seem more creative, psychologically minded, and think in more complex ways, have more mature relationships, have less rigid gender roles, and are more sensitive to and accepting of psychological conflict. Other constructs are related curvilinearly with ego development. Individuals at the middle levels of ego development are more compliant, authoritarian, and have more tightly controlled impulses.

Ego Development: The Measure

Loevinger's conception of ego development has been operationalized in an extensively researched measure, the Washington University Sentence Completion Test of Ego Development (WUSCTED) developed and revised by Loevinger and her colleagues (Loevinger, 1985; Loevinger & Hy, 1996; Loevinger & Wessler, 1970). This instrument

requires the individual to complete 36 sentences. The reliability and validity of the sentence completion test as a measure of ego development have been well documented (Cohn, 1991; Hauser, 1976; Loevinger, 1979a, 1998; Loevinger & Wessler, 1970; Westenberg, Blasi, & Cohn, 1998). The 1996 revision of the WUSCTED and the scoring manual (Loevinger & Hy, 1996) was based on over 1000 cases, although Loevinger (1998) claims the sample is not a normative sample.

Internal Consistency. The internal consistency of the WUSCTED is high. Loevinger and Wessler (1970) reported Cronbach's alpha to be .91 for the sample in the original validational study, and later Loevinger (1979a) reported alpha coefficients of internal consistency to be approximately .85. Hansell, Sparacino, Ronchi, and Strodtbeck (1985) reported alpha coefficients of internal consistency of .70 and .80 for 12-item short forms, and Holt (1980) reported alphas of .77 and .76 for 12-item short forms. Novy & Francis (1992) reported alpha coefficients of internal consistency of .84 and .81 for the two 18-item halves of the WUSCTED, and .90 for the entire 36-item test. The high internal consistency of the WUSCTED supports internal validity by showing that it measures a unitary dimension.

Content Validity. Loevinger (1998) demonstrates content validity by explaining that ego development reflects the person's frame of reference, so an unstructured test that allows the individual to impose his or her own frame of reference is appropriate.

Discriminant validity/confounds. The discriminant validity of the sentence completion measure has been criticized because of its correlation with intelligence and with verbal fluency. As Hauser (1976) points out, it is important that the variance of ego

development level is not completely accounted for by intelligence or by verbal fluency.

Many researchers have noted a high correlation between the length of the sentence completions and the ego level of the responses. Loevinger and Wessler (1970) reported the correlation between ego development and the number of words used in responses as between .14 and .51 for samples of adult women. In McCrae and Costa's (1980) sample of adult men, ego development also correlated with fluency ($r = .64$).

Loevinger (1979a, 1998) admits that fluency is a distortion factor, but cautions that these high correlations do not prove that counting words is interchangeable with using the scoring manual. The expression of complex thoughts referring to interpersonal relations or to development of the sense of self requires more words than more simple thoughts referring to having fun or being happy. The answers that display high ego level are complex thoughts about relationships, development, and psychological causation whereas simple remarks about fun, being happy, or sad or mad, can be expressed in a brief phrase. Loevinger and Wessler (1970) point out that ego development includes aspects of conceptual complexity and that the expression of conceptual complexity in written responses requires more words to combine several ideas.

Vaillant and McCullough suggest that "number of words per response reflects both verbosity and an element of complexity of thought and psychological mindedness that is a legitimate index of ego level" (1987, p. 1193). Vaillant and McCullough suggest that the sentence completion test may also tap psychological mindedness and creativity and that the expression of creativity requires more words on the sentence completion test. Men who were viewed as cultural, ideational, creative, and intuitive in college scored at

the higher ego levels on the WUSCTED 30 years later (Vaillant & McCullough, 1987).

Researchers have also noted a correlation between IQ and the WUSCTED, with samples of children (Blasi, 1972), adolescents, (Hoppe, 1972), and adult men (McCrae & Costa, 1980). Hauser (1976) concludes that no more than between 16 and 25% of the variance in ego level is accounted for by intelligence, and reviews have concluded that ego development cannot be reduced to intelligence (Cohn, 1991; Hauser, 1976; Loevinger, 1979a).

Inter-rater reliability. Loevinger cites high inter-rater reliability as evidence of the communicability of the underlying construct. Loevinger and Wessler (1970) report a range of total agreements from 60% to 86% across the 36 items with a median of 77%. Holt's (1980) range across 12 items is 66% to 91% with a median of 81.5% for females and 67% to 88% with a median of 76% for males. In terms of reliability correlations across the 36 items, Loevinger (1998) reports correlations ranging from .49 to .88, with a median of .75. Holt reports a range from .57 to .90. Finally, inter-rater agreement on the overall item sum has been reported as .91 (Holt) and .94 (Novy & Francis, 1992).

Ego Development Across the Adult Life-Span

Ego Development and Gender

We would not expect to find gender differences in a sample of older adults. In adulthood, men and women are not expected to differ on ego level (Nettles & Loevinger, 1983). A meta-analysis showed that gender differences steadily declined in college and declined further among post-college age adults and then eventually disappeared (Cohn, 1991). Similarly, there were no gender differences in Holt's (1980) national probability

sample of adults 22-25 years of age. Finally, evidence from Novy (1992) shows that the WUSCTED is not gender-biased.

Ego Development and Age

If ego development is to be conceptualized and studied developmentally, its relation with age should be understood. The theory of ego development maintains that, after early adolescence, maturation or age effects do not account for the individual's progression through the stages. Loevinger's theory is more concerned with differences within age cohorts than between them, and unlike other stage theorists such as Erikson (1950, 1959, 1982) who postulate developmental changes with increasing age, Loevinger's theory of ego development does not postulate any direct relationship between ego level and chronological age.

An association with age is implied, however, as the theory does maintain that the earliest levels are rare after adolescence and the highest levels are impossible in childhood and rare in adolescence. However, from adolescence onwards, it is theoretically possible to have the highest levels of ego development represented within each age cohort. Empirical studies show that beyond age 14, within a given age cohort, a wide range of levels of ego development can be observed (Holt, 1980; Redmore & Loevinger, 1979; Westenberg & Block, 1993). Interestingly, there is an increasing potential for higher ego levels in older individuals and therefore, the variation in ego level is expected to increase with age (Loevinger, 1976; Westenberg & Gjerde, 1999).

Average Ego Level

Loevinger expects that most people will not reach her final stage, contending that

most adults reach a plateau in their ego development at the self-aware stage. Loevinger (1985) reported a modal level between the self-aware and conscientious levels for a national sample of 804 adults. In a meta-analysis of over 90 studies, the mean scores for adult samples were between the self-aware and conscientious levels (Cohn, 1998). Holt (1980) reported the self-aware stage as the modal level of development based on his data from a national probability sample of almost 1000 individuals between the ages of 16 and 26.

The Stability of Ego Development: Theoretical Perspective

Can ego development change? Does ego development change throughout the adult life-span? Because ego development is theoretically linked to interpersonal experiences we would expect that adult levels of ego development should be influenced from sources in the environment.

Inherent in Loevinger's theory of ego development is the implication that individuals reach a plateau in their ego development in early adulthood because of the stability of the environment that she sees as characteristic of adulthood (Loevinger et al., 1985). Her belief that most adults stabilize is based on her assumption that interpersonal experiences are more stable in adulthood. According to Loevinger, adults are faced with the pressure for conformity and the resulting general stability of their environments impedes further development. Loevinger (1976) suggests that it is due to such stability of adult environments that change in ego development is not common in adulthood: "Ego development represents a structure of expectations about primarily interpersonal phenomena, phenomena that she believes become more stable in adulthood" (Bursik,

1991, p. 301).

The implication is that the reason that change is not the norm for most adults is because of the stability of their environments, rather than because of a process of ego development that is inherently stable. This suggests that it is theoretically possible to observe change if the environments do not fit this assumption of stability.

Although proposing that most individuals do not progress in ego level throughout adulthood, Loevinger (1976) did propose that exposure to appropriate experiences are associated with the attainment of higher levels of ego development. Loevinger indicates that beyond late adolescence, ego development may undergo continued development for some individuals but remain static for others and suggested that people mature when they are exposed to slightly more complex interpersonal environments than their own level of development (Kroger, 2000; Loevinger, 1976).

Despite her contention that most adults reach a plateau in their ego development at the self-aware level in early adulthood, Loevinger does acknowledge that change may occur in response to a theory-relevant intervention and that in some individuals there can be further growth in ego development beyond adolescence, throughout adulthood.

It would seem that Loevinger conceives of ego development not as an inherently stable structure but rather as a process whereby the individual attempts to deal with the environment. Block (1982) offers a useful framework of the process of adaptation to life events. Block suggests that individuals will attempt to assimilate their new experiences into existing internal structures. When this occurs, the existing cognitive internal schemas do not change. When a stable environment is found, there is no reason to expect internal

personality change. In situations where assimilation is not an effective adaptation strategy, an alternative method of adaptation or dealing with the environment is to accommodate to the environment and develop new internal schemas. When the existing level of ego development is challenged by a certain environment or life event, ego development may have the potential to respond in such a way that it may increase to accommodate the environment. Ego development may increase through the adult years given appropriate environments.

Some authors have addressed the theoretical issue of whether ego development can undergo both growth and regression as forms of change. Block (1982) discussed the possibility of regressing to previous organizational structures. Loevinger (1976) acknowledges the possibility that ego development may not always progress sequentially towards the higher stages as an individual may also move towards less mature levels of ego development in response to "regressive" experiences (Loevinger et al., 1985). The pressure for conformity in adult environments may lead to regression (Helson & Roberts, 1994), and life changes may sometimes lead to regression in ego development (Bursik, 1991). Adams and Fitch (1982) also suggest looking beyond the orthogenetic principle of human development which states that individuals move to more integrated and differentiated stages of development, pointing out that ego development may also decrease as a form of change. Deterioration in adulthood as well as positive growth should be considered.

The question of the trajectory of ego development across the life-span will be considered by examining when ego development typically stabilizes. Then this review

will turn to an examination of whether life events in adulthood impact on ego development. Finally, empirical studies of specific experiences and interventions designed to increase ego development will be reviewed.

It should be noted that in examining the issue of stability and change in ego development, the studies typically consider mean-level (not rank-order) stability, with the exception of Westenberg & Gjerde (1999).

Empirical Studies on Normative Change: When Does Ego Development Typically Stabilize?

Cohn (1998) examined Loevinger's hypothesis that ego level increases during adolescence and then stabilizes for most individuals by early adulthood. The findings from this meta-analysis of over 90 cross-sectional and longitudinal studies support Loevinger's hypothesis that ego development stabilizes for most individuals by early adulthood. However, the age groups examined by these studies do not extend beyond young adulthood.

Westenberg & Gjerde (1999) investigated the rank-order stability of ego development in an ongoing longitudinal study in which participants were measured twice (middle adolescence/age 14, and young adulthood/age 23). The results indicate significant gains in ego level between ages 14 and 23. It will be interesting to follow the results of this continuing study for an understanding of the normative changes in ego development throughout the adult years.

In sum, normative changes are expected in ego development until early adulthood. No conclusions can be made about normative change throughout adulthood.

Empirical Studies of Experiential Change

Although Loevinger's theory is not age-linked in adulthood, some mean change in ego level may be expected with the experience of adult life. For a complete understanding of ego development across the life-span, we must consider ego development beyond young adulthood. The view that personality may change with a changing environment suggests that the many changes that occur during adulthood (marriage, childbirth, illness, group membership, health, living situation, retirement) can lead to continued personality development (Stevens & Truss, 1985). There is a need for research to examine life experiences that may be relevant to change (Helson, 1993).

Newman, Tellegen, & Bouchard (1998) estimated the genetic and environmental contributions on ego development (in a behavioral genetics design for a sample of adult twins reared apart) and found that adults differ in their level of ego development because of both heredity and variations in experience. They found a substantial influence of unshared environment on ego development and they suggest that researchers who investigate the sources of influence on personality change in adulthood may elucidate the specifics of these experiences that promote ego development.

A 20-year longitudinal (Helson & Roberts, 1994) study of adult women revealed increases in toleration and psychological mindedness, two traits related to ego development. This work found evidence that increases in women's ego development during midlife were associated with experiences such as dealing with issues of responsibility, achievement according to self-chosen standards, and multiple perspectives on self and life, as well as adaptation to difficult life events and challenges

(accommodative life challenges). The pattern of results showed different developmental trajectories over a 20 year period among women initially classified at the conformist and self-aware levels versus women classified at the conscientious and individualistic levels. Women who were initially classified at or below the self-aware level were less likely to increase in ego development than women at higher stages.

Bursik (1991) examined adaptation to divorce for its effect on fostering ego development in adulthood. For a sample ranging in age from 22 to 62, Bursik reported significant increases in ego development for 38% of her sample, and significant decreases for 12% of the sample, over a 1 year period for women going through divorce. This was viewed as a life change with the potential to affect ego development because of the "interpersonal nature of the disequilibrating event" (p. 304).

Empirical Studies of Specific Experiences: Intervention Studies

Some short-term longitudinal studies have reported change in ego development in response to specific experiences. These studies focus on how specific aspects of a person's environment can foster or impede ego development and a limited number of social contexts have been put forth.

Several authors have addressed the theoretical issue of whether lower or higher ego development levels are more likely to progress (Adams & Fitch, 1982; Helson & Roberts, 1994; M. White, 1985; Westenberg & Gjerde, 1999). It has become apparent (with the exception of Helson & Roberts, 1994) that individuals who initially score at or below the self-aware level show the greatest gains in contrast to those who initially score beyond the self-aware level. Overall, these interventions were successful only if the

average level at pretest was at or below the self-aware level.

A limited number of intervention studies have been designed to deliberately raise participants' ego level, based on the assumption that role-taking experiences would promote ego development. One group of studies exposed participants to peer mentoring and counselling, experiences that are thought to increase ego level through increasing one's capacity for perspective taking.

Bushe & Gibbs (1990) studied trainees in a 6 month professional consulting skills program and found that overall, adults did not increase in ego level in response to these experiences. Some participants increased while others decreased. However, the participants in these studies scored at the self-aware level or higher at pre-testing, suggesting that challenging interpersonal experiences may facilitate development mainly among individuals at the lower levels of ego development.

Bernier (1980) studied the impact of a psychological education curriculum package designed to stimulate growth in ego development. This program was piloted with 18 counsellors and teachers enrolled in a graduate workshop in "developmental education," an intensive 6-week summer workshop where they were instructed in theory that emphasized understanding students from a developmental perspective, followed by a supervised, field-based practicum in the fall. The results revealed no significant changes in ego level during the 6 month program, with pre and post-test scores clustering at the self-aware level.

Other research studied interventions that were not designed specifically to increase ego level. In the context of a six-month nurse practitioner training program for a

sample ranging in age from 23 to 59, M. White (1985) reported an increase in ego development for those people initially at the lower stages. This program was viewed as theory-relevant since responsibility and autonomy were central to the program as was building cooperative relationships with colleagues. M. White found that individuals at the self-aware level or below stayed the same or increased in ego development, while those at the conscientious level or above either stayed the same or decreased. Thus, it appears that individuals at the lower ego levels were able to gain from the experience. The absence of change for the higher levels may be because the training program did not offer environments that could challenge these individuals.

Summary of Research Findings

In sum, theory and research point to normative change in ego development until early adulthood. The lack of studies focusing on adult age groups makes it difficult to make any conclusions about normative change throughout adulthood. The possibility for growth associated with the different experiences of adult life is suggested by Loevinger's theory and is supported by the work of Helson & Roberts (1994) and Bursik (1991) who asked whether there are particular events or experiences that may foster ego development in adulthood. Research has begun to delineate the experiences in adulthood that may be contexts for change in ego level and supports Loevinger's contention that ego development may progress in adulthood as a result of sufficient theory-relevant experiences. Even if the average adult may not change in ego level, there is still a need to understand whether adults can or indeed do change in response to specific interventions. Some interventions have been proposed and tested. At this point, research should now

seek to identify other social experiences that facilitate ego development in the adult years in general and in older adulthood specifically. What are some contexts that may be particularly relevant to older adults?

The Need to Study New Contexts for Personality Development in Late Adulthood

There is a need for research that examines the influence of agents of change based on hypotheses about factors that promote or inhibit personality change among older adults.

Environments in Old Age: Challenging or Stable

Some theorists have suggested that much of the stability of adult personality is the result of living in a stable environment, and that with age, people confront fewer demands to adapt to changes in the environment (Loevinger, 1976; Loevinger et al., 1985). This assumption of stable environments stands in stark contrast to the view of life-span theorists who maintain that individuals face challenges throughout their lives. They suggest that adulthood brings experiences more interpersonally challenging than those in childhood and adolescence (Haan et al., 1986).

Many theorists in the field of gerontology hold that elderly people are a heterogeneous age group (Dannefer, 1988), and for many, the social environment produces variation, not conformity among older adults. Indeed, Whitbourne (1986) points out that adults often purposely seek changes.

Moreover, many are recognizing, particularly in the present historical context, that many challenges to the stability of personality are unique to old age such as factors

related to retirement. The theme of "self-management" has emerged in discussions of how retirees spend their time and the view of aging as a chance for individuals to seek out opportunities for growth and development is taking hold (Sterns & Gray, 1999). It has also been suggested that the later years can be a time of optimal personal growth since many earlier responsibilities towards family and career are no longer required, leaving more discretionary time (Kalish, 1979). This recent emphasis on aging well has led gerontologists to recognize that older people "can play significant proactive roles and behave in ways that draw upon and can generate resources in their environment" (Kahana & Kahana, 1996, p. 18).

In sum, it seems that healthy older adults have more opportunities to pick and choose their interpersonal worlds and environments and there is a great deal of heterogeneity in how older adults spend their retirement years. The choices people make are important in adapting to aging and in maintaining competence. The retirement years offer unique opportunities for elderly individuals to participate in activities that they can choose. Activities chosen in the retirement years may be less restrictive than activities chosen in younger adulthood which are more likely to be based on age related roles involving work and family. Elderly individuals actively choose their environments and adjust "behaviors and aspirations in order to maintain a sense of competence in a changing environment" (Herzog & House, 1991, p.52). The implication is that elderly individuals choose environments in which they can be successful and competent.

Volunteering as a Relevant Context

Various contexts may affect personality in late adulthood, including social

network activity, formal and informal supports, and the broader community (Kroger, 2000). Many adults participate in volunteering in their retirement years. (Herzog & Morgan, 1993; Musick, Herzog, & House, 1999). The elderly individual who chooses to engage in volunteer activities may encounter exciting challenges and opportunities for many new meaningful experiences. Volunteering is a productive activity that provides seniors with an objective through organizational involvement (Fengler, 1984) and with an opportunity to experience success in their retirement years (S. Newman, Vasudev, & Onawola, 1985). Furthermore, volunteering is an activity through which individuals can have an impact on and contribute to their communities.

In the United States, over the past 25 years, the number of elderly volunteers has increased. However, a survey in the United States by the Independent Sector (1988) found that 40% of elderly non-volunteers indicated they would like to perform some volunteer work and 20% of volunteers indicated they would like to volunteer more (Herzog & Morgan, 1993). The discrepancy between desired and actual amount of volunteering suggests that recruitment efforts by volunteer agencies may be useful and appreciated. Given the important role that volunteering can play in maintaining effective levels of activity among retired seniors and the positive impact of volunteering on the health and well-being of elderly individuals (Van Willigen, 2000), a prospective study of volunteerism among retired seniors is particularly relevant (see Pushkar, Reis, & Morros, 2000).

Personality and Volunteering

Researchers have been investigating personality as a predictor of volunteerism for

at least twenty years. Several key personality dimensions emerge as predictors of volunteering. Volunteers tend to have lower levels of anxiety than non-volunteers (Howarth, 1976; Herzog & Morgan, 1993), to have more extraverted characteristics (Herzog & Morgan, 1993; Pushkar et al., 2000; Smith & Nelson, 1975; Spitz & MacKinnon, 1993) and to be more intelligent and imaginative (Spitz & MacKinnon, 1993).

The dominant view in the field of personality is that personality shapes lives; the influence of life experiences on personality receives less attention (Magnusson, 1990). The research emphasis on personality as a predictor of volunteerism reflects this bias. Personality has been conceptualized as a predictor rather than developmentally as an outcome of volunteering. The benefits of volunteering have been limited to health and life satisfaction measures and not developmental constructs such as ego development. One of Loevinger's unique contributions has been to offer a developmental perspective to the field of personality research.

Ego Development and Volunteering

Research is needed to test specific hypotheses of theory-relevant change in ego development. If ego development continues to progress through the adult years, it is important to identify the experiences in adulthood that promote development, such as challenges stimulating new perspectives. Loevinger (1976) suggested that people may progress in ego development when confronted with interpersonal environments that are more complex than their own level of development. Block (1982) said that adaptation to challenges requires that the individual move from egocentricity to a wider and more

flexible perspective. Opportunities that require increased opportunities for perspective taking (Bernier, 1980), experiences that involve new ways of thinking (Helson & Roberts, 1994), and exposure to environments characterized by personal responsibility (Bernier, 1980; White, 1985) have been said to contribute to ego development.

The elderly individual who chooses to engage in volunteer activities can be required to respond to new challenges and is provided with opportunities for many new meaningful experiences. Moreover, volunteering allows the individual to confront complex interpersonal environments as they provide services in a context of responsibility. Volunteers come into contact with new people and situations, and are presented with circumstances that stimulate understanding and with opportunities to increase their capacity for perspective taking, thereby stimulating more differentiated views of the self and others. Volunteering requires flexibility and being able to deal with complexity, hallmarks of the higher ego levels. The complex interpersonal environments provided by volunteering may require that the individual confront environments and contexts that challenge their current ego level. However, no studies have been conducted examining the relation between volunteering and ego development nor the potential of volunteer activity to promote ego development.

The Present Study

Longitudinal research is needed to measure the effect of volunteering experience on the personality development of elderly individuals. The proposed program of study will explore volunteering as a potentially theory-relevant intervention for ego development. The proposed research is designed to examine the relationships among

personality, ego development, and volunteering among retired seniors. The theoretical model underlying this research is that stable personality traits (e.g., extraversion) will predict volunteer activity, which in turn will influence ego development. The main hypothesis is based on the assumption that volunteering provides a unique opportunity for personality growth among elderly individuals.

The relationship between the dimensional approach to personality and volunteering is addressed in hypothesis #1. The relationship between the ego developmental approach to personality and volunteering is addressed in hypotheses 2 and 3. Finally, exploratory analyses examine further relationships between ego development and volunteering. The first 2 hypotheses can be tested early on in the study and compare volunteers with non-volunteers. The second and third hypotheses both state that volunteer experience is related to ego development.

Hypothesis #1

Based on personality trait theory and the results of previous research that extraverts are more likely to volunteer, it can be hypothesized that high scores on the dimension of extraversion increase the likelihood of volunteering. Being assertive, active, and enjoying social stimulation should prompt elderly individuals to seek out volunteering activities. Therefore it is hypothesized that elderly individuals who are currently volunteering will score higher on the trait of extraversion than individuals who are initially not volunteering.

Hypothesis #2

It is hypothesized that elderly individuals who are currently volunteering will have

higher ego development than elderly individuals who are initially not volunteering. Cause and effect cannot be inferred from a cross-sectional analyses so the third hypothesis addresses the longitudinal research needed to address whether participation in volunteer work promotes ego development for elderly individuals who are not volunteering.

Hypothesis #3

The main hypothesis is based on the assumption that volunteering can provide a unique opportunity for personality growth among elderly individuals. It is hypothesized that older adults who are not volunteering (initial non-volunteers) will increase in ego development after a six-month volunteer intervention. Analyses will also examine the impact of the volunteer intervention on individuals already volunteering (current volunteers). Because of the high correlation between ego development and fluency, and between ego development and education, this hypothesis will also be considered adjusting for the possible contribution of these variables to ego development.

Individuals at the conformist (level 3) or self-aware (level 4) levels would be expected to either stay the same or increase in ego development whereas those at the conscientious level (level 5) or above would be expected to either stay the same or decrease. Dividing the sample at the self-aware level has been justified on theoretical and methodological grounds (Adams & Fitch, 1982; M. White, 1985; Westenberg & Gjerde, 1999).

Exploratory Analyses

Exploratory analyses will examine (a) volunteer extensiveness and (b) gender, in

relation to ego development. In addition, (c) non-parametric analyses of intra-individual change in ego development will be described.

Follow-up

Exploratory analyses will determine if any impact of volunteering on ego development was maintained one year after the volunteer intervention. In addition, participants' perceptions of their volunteer experiences will be described, including an analysis of volunteering in relation to ego development.

Method

Participants

The sample initially consisted of 153 adults. However, 103 participants (67%) completed all three stages of the study. The sample consisted of 72 women and 31 men, aged 55 to 83, with a mean age of 66.83, retired and living in the Montreal area. Participants had a mean educational level of 14.80 years.

Current volunteers are individuals who are currently volunteering in the community with a non-profit organization, for at least a minimum of three hours per week for three months or more. Initial non-volunteers were either former or new volunteers. Former volunteers are individuals who have volunteered in the past, through a non-profit organization, but are not presently volunteering and have not volunteered within the last six months. New volunteers are individuals who have never volunteered.

A series of analyses was performed to determine if there were statistically significant differences between those participants who completed the study and those who did not, on the demographic variables of age, gender, years of education, and marital status, and on the personality variables, perceived health, well-being, and on ego development.

Differences in proportions of men and women, and in married and unmarried individuals, between the 2 groups of participants were evaluated with chi-square analyses. Statistical evaluation by chi-square showed that the proportions of men and women who completed the study and those who did not were similar, $\chi^2(1, \underline{N} = 153) = .238, \underline{p} = .63$. Statistical evaluation by chi-square showed that the proportions of married and unmarried

individuals who completed the study and those who did not were similar, $\chi^2(1, N = 153) = .161$, $p = .69$.

A MANOVA tested for the significance of differences on age and years of education between the 103 participants who completed the study and the 50 who did not, $F(2, 150) = .599$, $p = .55$. Univariate ANOVAs indicated that the participants who did not complete the study did not differ significantly from the completers on age, $F(1, 151) = .09$, $p = .76$, nor on years of education, $F(1, 151) = 1.16$, $p = .28$.

A MANOVA tested the significance of differences on the study variables of the five personality traits, well-being, health, and ego development between the 103 participants who completed the study and the 50 who did not, $F(8, 144) = 3.04$, $p < .01$. Univariate ANOVAs indicated that the personality trait of agreeableness, $F(1, 151) = 10.38$, $p < .01$, and ego development, $F(1, 151) = 7.11$, $p < .01$, differentiated among the participants, with those participants who completed the three phases of the study scoring higher.

Procedure

Participants were recruited to participate in the Senior Volunteer Involvement Project (Senior VIP) whose aim was to study and increase volunteering among retired seniors. Participants were recruited through a variety of agencies that work with retired people over the age of 55 (e.g. retirement clubs, community centres, volunteer organizations) and through advertisements placed in newspapers.

Initial non-volunteers received a brief description of the volunteer project over the phone and an appointment was made with those who indicated that they would be

interested in volunteering within the community for a period of six months at a position they would find through the project. Participants currently volunteering within the community were invited to meetings held at the university where various issues pertaining to volunteering and specific ideas for the program were discussed. An appointment was made with those current volunteers who indicated an interest in volunteering for an additional three hours per week for six months within the volunteer project at the university.

The methodology follows a pre-post longitudinal design. Participants were tested before and after six months of volunteering in the community. The current volunteers volunteered within the project for three hours per week for six months in addition to their current volunteer work in the community. The new and former volunteers volunteered within the community, in a position they found through the volunteer project for a minimum of three hours each week for a minimum of six months.

Personal data with respect to age, marital status, educational and employment history and volunteer activity history was collected in a structured interview. At four testing times participants completed a series of standardized psychological measures to assess personality and psychological functioning during a session that lasted approximately 1 to 1 1/2 hours. This battery of measures was administered immediately following recruitment (Time 1). Retesting (Time 2) took place after 3 months, before the intervention, to take into account changes during the 3-month wait period. This procedure was followed in order to determine the baseline stability of psychological functioning before beginning the volunteer intervention. Post-intervention testing (Time

3) took place immediately following the six months of volunteering. In addition, follow-up testing (Time 4) was conducted 1-year after the end of the volunteering experience to assess which people were still volunteering and if any benefits of volunteering were maintained in the long term. Informed consent (Appendices A-G) was obtained by participants at all 4 testing points.

This study had a noteworthy subsample who did not complete the study. Some individuals dropped out after the first testing time, others after the wait period either just before starting the six month intervention, or during the intervention. In total, fifty participants dropped out before post-intervention (Time 3) testing, leaving a sample size of 103 at Time 3, and an overall completion rate of 69% (and an overall drop-out rate of 31%). These attrition rates are comparable to those reported by Fischer and Schaffer (1993).

Measures

Ego Development

Ego development was measured by the short form of the Washington University Sentence Completion Test of Ego Development (WUSCTED; Hy & Loevinger, 1996; Loevinger, 1985), which consists of 18 sentence stems that the individual is asked to complete (Appendices H, I, J). Novy and Francis (1992) and Loevinger (1985) present evidence that attests that the 2 halves of the 36-item WUSCTED can be used interchangeably as short forms in pre and post designs. Furthermore, the 2 halves are comparable for men and women (Loevinger, 1985; Novy, 1992). The 2 halves each consist of 18 sentence stems that the individual is asked to complete (Hy & Loevinger,

1996). Participants were given a page with 18 sentence stems, considered a protocol, and asked to complete each sentence.

Scoring of the Washington University Sentence Completion Test of Ego Development. Protocols are scored for level of ego development according to Hy and Loevinger's (1996) scoring manual. WUSCTED responses were transcribed and each sentence answer was scored separately from all other sentence answers and was individually assigned to one of eight ego developmental levels by matching each sentence completion with response categories provided in the scoring manual. The author scored the 18 sentence completions for each protocol, and a second rater independently double-scored a subsample of the protocols. When the two independent scores for a given item were in complete agreement, the rating was considered final. The raters discussed and resolved any differences to reach a compromise rating for each response. The present study used Hy & Loevinger's (1996) item sum rules to assign a Total Protocol Rating for each 18-item protocol. An ego development score for each individual is computed by adding together the scores for the 18 sentence completions for each individual.

Pre and Post Testing of Ego Development. The WUSCTED used in this study was modified to make each half of the 36 item test (stems 1-18 and stems 19-36) usable as abbreviated alternate matched short forms. Novy and Francis (1992) provide empirical justification for using the two halves and suggest the two halves be used in research designs that require pre and post tests.

In the present study, at Time 1, all participants were given the first half, Form-A of the WUSCTED. At Time 2, half were give Form-A again, and half were given Form-

B. This was done to see if there is a difference in the pattern of results for those who were given the same form, versus those given a different form. Participants who were given Form-A at Time 2 were given Form-B at Time 3, and those given Form-B at Time 2 were given Form-A at Time 3. Participants who were given Form-A at Time 3 were given Form-B at Time 4, and those given Form-B at Time 3 were given Form-A at Time 4. Therefore, there were two different configurations for those who completed the 3 phases of the study: AAB (n=51) and ABA (n=52).

A MANOVA revealed that overall, ego development scores did not differ for participants given the 2 counter-balancing configurations, $F(3, 99) = 1.67$, $p = .18$. Univariate ANOVAs indicated that ego development scores on different versions did not differ at Time 1, $F(1, 101) = .67$, $p = .41$; Time 2, $F(1, 101) = .128$, $p = .72$; and Time 3, $F(1, 101) = .755$, $p = .39$, suggesting that different versions of the test did not account for the pattern of results on ego development.

Fluency

Because of the correlation between ego development and the number of words used in responses (Loevinger, 1998; Loevinger & Wessler, 1970; McCrae & Costa, 1980), a fluency score, computed for each individual, was also determined by a word count of each protocol to determine the influence of speech abundance on ego development scores.

Personality

The NEO Five Factor Inventory (NEO-FFI; Costa & McCrae, 1989), a shortened version of the NEO Personality Inventory (Costa & McCrae, 1985), measures the adult

personality dimensions of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness (Appendix K).

The NEO Five Factor Inventory consists of 60 statements to which the individual responds on 5-point Likert type scales ranging from "strongly disagree" to "strongly agree." Responses to items are summed to yield a score for each of the five domains of personality. Test development, validation, and reliability are reported in the NEO-PI/FFI Manual Supplement (Costa & McCrae, 1989). Alpha coefficients of internal consistency for the five global scores were .89, .79, .76, .74, and .84 for the Neuroticism, Extraversion, Openness, Agreeableness and Conscientiousness scales respectively. When correlated with the original factors, the NEO-FFI scales showed correlations ranging from .75 for the Conscientiousness scale to .89 for the Neuroticism scale.

Measures of Volunteering Experience

The present study focussed on formal volunteering, through organizations or institutions. Volunteer experience was measured in 2 different ways, to examine the main hypotheses of this study.

(a) Volunteer extensiveness is a measure of the total amount of hours of volunteer experience for participants. Lifetime Hours is a measure of the total hours current and former volunteers had completed over their lifetimes (at Time 1 testing) by the beginning of the project. Weekly Hours is an average number of hours participants were volunteering weekly at follow-up testing.

(b) Volunteer status is the second type of volunteer experience variable, a grouping factor with two levels representing current volunteers and initial non-volunteers.

Volunteering experience has been operationalized by this dichotomous measure since previous research and theory suggest that the identity of being a volunteer may contribute to benefits from volunteering (Musick, Herzog, & House, 1999).

Health and Life Satisfaction

The General Health Questionnaire (Goldberg, 1978) was used to assess self-reported health and the Memorial University of Newfoundland Scale of Happiness (MUNSH; Kozma & Stones, 1980) was used to assess life satisfaction.

Follow-up Interview Measures

At Time 4, one year after completing their volunteer intervention, a follow-up interview was conducted to assess which people were still volunteering and if any benefits of volunteering were maintained in the long term (Appendices L & M).

Data Analysis for Study Outcomes

The data from this study will be analyzed using a variety of multivariate techniques. MANOVAs will be used to test for group differences. Repeated measures ANOVAs will test the significance of changes in psychological outcomes for participants. A 2-way ANOVA will be performed to examine changes in current and in initial non-volunteers' ego development scores across the 3 time points in the project. This analysis will determine whether there are effects for volunteer status, for time, or an interaction between time and volunteer status, and consequently will be used to address hypotheses 2 and 3. In addition, non-parametric analyses will be conducted on interview data, and on ego development data.

Results

Preliminary Results

The descriptive statistics for the demographic variables are presented for the entire sample of 103 individuals and for current, new and former volunteers in Table 1. The age range for the combined groups covers 28 years (from 55 to 83) with a mean age for participants of 67 years. The range in years of education is also wide (6-24 years).

A series of analyses was performed to determine if there were statistically significant differences between the three groups of participants on the demographic variables of age, gender, years of education, and marital status.

Differences in proportions of males and females, and those married and unmarried, between the three groups of participants were evaluated with chi-square analyses. Table 2 shows the proportions of males and females in the current, new and former volunteer groups. Statistical evaluation by chi-square showed that the proportions of men and women in the three groups were similar. Table 3 shows the proportions of presently married and unmarried individuals in the current, new and former volunteer groups. Statistical evaluation by chi-square showed that the proportions of married and unmarried individuals in the three groups were similar.

Mean differences in age and in years of education among current, new and former volunteers were assessed with MANOVAs followed by univariate ANOVAs. The results indicated that the 3 groups differed significantly, $F(4, 200) = 6.47$, $p < .001$, with current volunteers being significantly older than both former and new volunteers, $F(2, 100) = 8.75$, $p < .001$, and having completed more years of education than the new volunteers,

Table 1

Descriptive statistics and univariate analyses of variance for demographic variables for entire sample (N=103), Current (N=29), Former (N=55), and New (N=19) Volunteers.

Measure	M	SD	Range	N	F
Age					8.75***
Entire Sample	66.83	6.46	55.00 - 83.00	103	
Current	70.21	5.47	58.00 - 82.00	29	
Former	66.40	5.89	56.00 - 83.00	55	
New	62.90	7.14	55.00 - 79.00	19	
Years of Education					4.57*
Entire Sample	14.80	3.39	6.00 - 24.00	103	
Current	16.10	3.30	11.00 - 22.00	29	
Former	14.65	3.34	8.00 - 24.00	55	
New	13.21	3.07	6.00 - 20.00	19	

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

Table 2

Cross-Tabulation of Volunteer Status with Gender (N=103)

	Volunteer Status		
Gender	Current	Former	New
Male	8	18	5
Female	21	37	14

Note: Cell numbers indicate actual numbers

χ^2 (2, N = 103) = .40, p = .82 (NS)

Table 3

Cross-Tabulation of Volunteer Status with Marital Status (N=103)

	Volunteer Status		
Marital Status	Current	Former	New
Married	17	26	10
Unmarried	12	29	9

Note: Cell numbers indicate actual numbers

χ^2 (2, N = 103) = .99, p = .61 (NS)

$F(2, 100) = 4.57, p < .05$.

Overall, these preliminary analyses show some differences in demographic variables between the three groups of participants with the current volunteers being older than both former and new volunteers, and having completed more years of education than the new volunteers. Since there were no significant differences between the former and new volunteers, and because of the small number of new volunteers, the decision was made to combine these 2 groups of non-volunteers.

Descriptive Statistics for Study Variables

Table 4 presents the correlations between the variables examined in this study. Table 5 presents the means and standard deviations for the study variables. Repeated measures MANOVA, followed by univariate ANOVAs, tested for the significance of differences across the 2 groups on scores of well-being, subjective health, and the five NEO personality variables across Time 1 to Time 3.

The results showed a significant main effect for group, $F(7, 95) = 2.21, p < .05$, no significant interaction between time and group, $F(14, 88) = .89, p = .57$, and no significant main effect of time, $F(14, 88) = .77, p = .70$. Follow-up ANOVAs revealed that there were significant differences between the groups on Neuroticism at Time 2, $F(1, 101) = 3.88, p < .05$; and at Time 3, $F(1, 101) = 5.49, p < .05$; and a trend at Time 1, $F(1, 101) = 3.47, p = .07$. Extraversion also differed significantly between the 2 groups at Time 1, $F(1, 101) = 7.21, p < .01$; at Time 2, $F(1, 101) = 7.75, p < .01$; and at Time 3, $F(1, 101) = 8.36, p < .01$). In addition, Openness scores differed (a trend) between the 2 groups at Time 3, $F(1, 101) = 3.62, p = .06$. Well-being also differed significantly between the 2 groups at Time

Table 4

Correlation Matrix of Study Variables

Time 1 Variables

	Ego	FLU	Neuro	Extra	Open	Agree	Consc	Life hrs	MUNSH	HEALTH
Age	.08	-.02	-.06	.05	-.18	.17	-.09	.27*	-.03	.01
Gender[a]	.03	.12	.06	.12	.23**	.08	.12	-.00	.02	.21
Marital[b]	.13	.08	-.07	-.01	-.10	-.19	.03	-.01	.12	-.07
YearsEd	.38***	.13	-.06	-.14	.23*	-.10	.01	-.10	.23*	.13
Status[c]	-.39***	-.23*	-.18	-.26**	-.13	-.08	-.06	-.36***	-.22*	-.15
Ego development		.80***	.04	.01	.31**	-.08	-.08	.06	.06	.14
Fluency			.02	.02	.27*	.01	-.02	-.04	.02	.16
Neuroticism				-.33***	-.20*	-.29**	-.35***	.01	-.52***	-.48***
Extraversion					.25*	.16	.34***	.17	.23*	.19*
Openness						-.01	.13	-.13	.10	.12
Agreeableness							.23*	-.14	.11	.15
Conscientiousness								.00	.21*	.13
Life Hours									-.15	-.08
MUNSH										.62***

[a] gender is coded 1=male, 2=female
[b] marital status is coded 0=unmarried, 1=married
[c] volunteer status is coded 1=current, 2=non

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

Table 4 (continued)

Correlation Matrix of Study Variables

Time 2 Variables

	Ego	FLU	Neuro	Extra	Open	Agree	Consc	MUNSH	HEALTH
Age	.12	-.03	-.01	.05	-.19	.07	-.08	.01	.01
Gender[a]	.14	.11	.02	.16	.20*	.03	.02	.14	.11
Marital[b]	-.04	.03	-.05	-.06	-.12	-.14	.07	.08	-.07
YearsEd	.36***	.15	-.10	-.10	.19*	-.06	-.03	.13	-.05
Status[c]	-.24*	-.22*	.19*	-.27**	.09	.05	-.04	-.28**	-.21*
Ego development		.75***	.08	-.04	.15	.15	-.08	-.06	-.14
Fluency			.16	-.02	.16	-.00	-.06	-.12	-.15
Neuroticism				-.31***	-.11	-.33***	-.50***	-.65***	-.66***
Extraversion					.30**	.16	.46***	.40***	.32***
Openness						-.07	.16	.21*	.04
Agreeableness							.21*	.14	.24*
Conscientiousness								.28**	.28**
MUNSH									.69***

[a] gender is coded 1=male, 2=female
[b] marital status is coded 0=unmarried, 1=married
[c] volunteer status is coded 1=current, 2=non

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

Table 4 (continued)

Correlation Matrix of Study Variables

Time 3 Variables

	Ego	FLU	Neuro	Extra	Open	Agree	Consc	MUNSH	HEALTH
Age	.06	.05	.03	.01	-.22*	.18	-.05	-.01	-.08
Gender[a]	.13	.20*	.07	.08	.16	.13	.07	-.02	.04
Marital[b]	-.02	-.02	-.10	.05	-.07	-.23*	.06	.15	.05
YearsEd	.28**	.12	-.08	-.10	.21*	-.10	-.03	.22*	.09
Status[c]	-.20*	-.26**	.23*	-.28**	-.19	-.04	-.12	-.25*	-.23*
Ego development		.82***	-.08	.11	.26**	.03	.03	.05	.02
Fluency			-.08	.14	.30**	.02	.09	.03	.06
Neuroticism				-.32***	-.15	-.38***	-.44***	-.64***	.64***
Extraversion					.25**	.12	.39***	.28**	.27**
Openness						-.09	.06	.15	.12
Agreeableness							.25**	.25**	.19*
Conscientiousness								.19*	.24**
MUNSH									.77***

[a] gender is coded 1=male, 2=female
[b] marital status is coded 0=unmarried, 1=married
[c] volunteer status is coded 1=current, 2=non

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

Table 4 (continued)

Correlation Matrix of Study Variables

Time 4 Variables

	Ego	FLU	Neuro	Extra	Open	Agree	Consc	Week hrs	MUNSH	HEALTH
Age	.05	.00	.06	.02	-.14	.11	-.11	.09	-.00	-.10
Gender[a]	.09	.14	.05	.08	.15	-.00	.17	.14	-.04	-.06
Marital[b]	-.05	-.04	-.09	-.01	-.10	-.15	.12	-.15	.11	-.02
YearsEd	.25*	.10	-.07	-.19	.18	-.05	-.04	-.11	.15	.02
Status[c]	-.20	-.21*	.22*	-.34**	-.26*	.02	-.18	-.26*	-.19	-.15
Ego development		.83***	.08	-.03	.23*	.03	-.07	.08	.02	-.05
Fluency			.01	.04	.10	.04	.02	.09	-.05	-.10
Neuroticism				-.33**	-.20	-.44***	-.56***	-.20	-.60***	-.68***
Extraversion					.34**	.11	.42***	.27*	.33**	.42***
Openness						-.06	.17	.19	.15	.25*
Agreeableness							.36***	-.01	.23*	.20
Conscientiousness								.28*	.47***	.43***
Week Hours									.32**	.19
MUNSH										.77***

[a] gender is coded 1=male, 2=female
[b] marital status is coded 0=unmarried, 1=married
[c] volunteer status is coded 1=current, 2=non

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

Table 5

Mean Scores and Standard Deviations for Study Variables

Current Volunteers (N=29)

	Time 1		Time 2		Time 3	
	M	SD	M	SD	M	SD
Ego Development	98.31	9.93	95.28	8.21	95.62	9.18
Neuroticism	14.79	4.51	14.72	4.53	14.28	5.99
Extraversion	30.07	5.18	30.93	5.50	30.69	5.27
Openness	29.83	4.59	29.66	5.11	30.03	4.53
Agreeableness	34.59	4.10	34.31	4.38	34.93	4.80
Conscientiousness	34.97	7.53	34.45	8.07	35.14	7.77
MUNSH	37.41	5.25	38.59	4.48	38.17	4.83
Health	99.83	4.01	100.21	3.88	100.52	3.47

Table 5 (continued)

Mean Scores and Standard Deviations for Study Variables

Initial Non-Volunteers (N=74)

	Time 1		Time 2		Time 3	
	M	SD	M	SD	M	SD
Ego Development	90.08	8.35	90.85	7.90	91.99	7.37
Neuroticism	17.30	6.66	17.39	6.71	17.50	6.38
Extraversion	26.97	5.29	27.54	5.58	27.31	5.36
Openness	28.19	5.91	28.55	5.38	27.72	5.91
Agreeableness	35.39	4.97	34.84	4.63	34.54	4.59
Conscientiousness	34.08	6.11	33.88	5.61	33.50	5.55
MUNSH	32.74	10.51	33.20	9.60	33.31	9.79
Health	97.65	7.29	97.38	6.65	96.65	8.39

1, $F(1, 101) = 5.20$, $p < .05$; at Time 2, $F(1, 101) = 8.36$, $p < .01$; and at Time 3, $F(1, 101) = 6.50$, $p < .01$. In addition, perceived health scores differed significantly between the 2 groups at Time 2, $F(1, 101) = 4.61$, $p < .05$; and at Time 3, $F(1, 101) = 5.75$, $p < .05$. In sum, current volunteers scored higher than initial non-volunteers on extraversion and well-being at all three time points, higher on perceived health at Times 2 and 3, and lower on neuroticism at Times 2 and 3.

Distribution of Ego Development

Table 6 presents the frequency of ego levels at the four testing times for this sample as a whole. Levels spanned nearly the entire range of ego development but most of the participants were at the self-aware and the conscientious levels. Other studies of adults have also found most participants at these two levels (Cohn, 1998).

Inter-Rater Reliability

The percentages of exact agreement in item scores between the two raters for each of the 36 sentences are given in Table 7. Inter-rater agreement on individuals' responses varied by sentence number and the range of total agreements is from 64.0% of individuals (for sentence #6, Time 4) to 100% (sentence #8, Time 4). Pearson correlations were also computed for the two raters for the individuals who were scored by both raters, and are presented in Table 8. Inter-rater reliability was also computed between the two raters' overall Item Sum scores of Ego Development. The correlation was .97 ($p < .001$, $n = 61$) at Time 1; .97 ($p < .001$, $n = 61$) at Time 2; .98 ($p < .001$, $n = 61$) at Time 3; and .98 ($p < .001$, $n = 51$) at Time 4. These data compare well with previous research (Holt, 1980; Loevinger & Wessler, 1970; Novy & Francis, 1992), and provide support for the inter-

Table 6

Distribution of Ego Levels for Entire Sample (N=103) at Time 1

Ego level		N	%	Cumulative %
1	Impulsive	0	0	0
2	Self-Protective	2	1.9	1.9
3	Conformist	12	11.7	13.6
4	Self-Aware	32	31.1	44.7
5	Conscientious	37	35.9	80.6
6	Individualistic	16	15.5	96.1
7	Autonomous	3	2.9	99
8	Integrated	1	1.0	100
	Total	103	100	100

Distribution of Ego Levels for Entire Sample (N=103) at Time 2

Ego level		N	%	Cumulative %
1	Impulsive	0	0	0
2	Self-Protective	1	1.0	.9
3	Conformist	8	7.8	9.3
4	Self-Aware	36	35.0	44.4
5	Conscientious	42	40.8	85.2
6	Individualistic	13	12.6	97.2
7	Autonomous	3	2.9	100
8	Integrated	0	0	100
	Total	103	100	100

Table 6 (continued)

Distribution of Ego Levels for Entire Sample (N=103) at Time 3

Ego level		N	%	Cumulative %
1	Impulsive	0	0	0
2	Self-Protective	2	1.9	1.9
3	Conformist	3	2.9	4.9
4	Self-Aware	32	31.1	35.9
5	Conscientious	49	47.6	83.5
6	Individualistic	14	13.6	97.1
7	Autonomous	2	1.9	99.1
8	Integrated	1	1.0	100
	Total	103	100	100

Distribution of Ego Levels for Entire Sample (N=85) at Time 4

Ego level		N	%	Cumulative %
1	Impulsive	0	0	0
2	Self-Protective	1	1.0	1.2
3	Conformist	6	5.8	8.2
4	Self-Aware	31	30.1	44.7
5	Conscientious	32	31.1	82.4
6	Individualistic	9	8.7	92.9
7	Autonomous	6	5.8	100
8	Integrated	0	0	100
	Total	85	100	100

Table 7

Percent Agreement between pairs of scorers by item of WUSCTED

Time 1: #1-18 n=61
Time 2: #1-18 n=31; #19-36, n=30
Time 3: #1-18 n=30; #19-36, n=31
Time 4: #1-18 n=25; #19-36, n=26
(n indicates number of protocols that were double-scored)

Item	% Perfect Agreement			
	Time 1	Time 2	Time 3	Time 4
1.	81.96	90.3	86.7	92.0
2.	76.69	93.5	76.7	80.0
3.	85.25	83.9	93.3	88.0
4.	86.89	93.5	86.7	84.0
5.	83.61	83.9	76.7	72.0
6.	78.69	77.4	80.0	64.0
7.	86.89	80.6	86.7	96.0
8.	83.61	93.5	83.3	100.0
9.	81.96	90.3	83.3	92.0
10.	86.89	90.3	93.3	96.0
11.	88.52	87.1	96.7	88.0
12.	85.26	77.4	93.3	84.0
13.	88.52	77.4	86.7	84.0
14.	85.25	93.5	83.3	84.0
15.	78.69	96.8	76.7	92.0
16.	81.96	87.1	80.0	84.0
17.	88.52	80.6	83.3	88.0
18.	75.46	83.9	80.0	80.0
19.		93.3	77.4	76.9
20.		93.3	87.1	84.6
21.		83.3	93.5	92.3
22.		90.0	90.3	92.3
23.		83.3	83.9	92.3
24.		86.7	96.8	92.3
25.		83.3	87.1	92.3
26.		86.7	90.3	88.5
27.		86.7	83.9	84.6
28.		93.3	90.3	69.2
29.		93.3	87.1	88.5
30.		80.0	93.5	80.8
31.		90.0	90.3	88.5
32.		90.0	93.5	88.5
33.		86.7	93.5	88.5
34.		86.7	96.8	92.3
35.		93.3	93.5	92.3
36.		86.7	90.3	84.6

Table 8

Inter-rater reliability
Pearson Correlations by item of WUSCTED
Time 1: #1-18, N=61
Time 2: #1-18 n=31; #19-36, n=30
Time 3: #1-18 n=30; #19-36, n=31
Time 4: #1-18 n=25; #19-36, n=26
(n indicates number of protocols that were double-scored)

Item	Pearson Correlation			
	Time 1	Time 2	Time 3	Time 4
1.	.71***	.93***	.89***	.96***
2.	.88***	.94***	.80***	.86***
3.	.88***	.76***	.97***	.95***
4.	.87***	.98***	.83***	.83***
5.	.87***	.91***	.90***	.63***
6.	.81***	.86***	.90***	.61***
7.	.86***	.76***	.87***	.98***
8.	.85***	.89***	.79***	.99***
9.	.89***	.96***	.90***	.97***
10.	.94***	.94***	.94***	.97***
11.	.93***	.85***	.98***	.95***
12.	.91***	.88***	.97***	.90***
13.	.89***	.91***	.95***	.80***
14.	.81***	.96***	.93***	.90***
15.	.85***	.99***	.89***	.95***
16.	.88***	.70***	.86***	.75***
17.	.91***	.84***	.92***	.86***
18.	.87***	.79***	.89***	.92***
19.		.98***	.74***	.84***
20.		.96***	.85***	.92***
21.		.90***	.98***	.95***
22.		.89***	.95***	.92***
23.		.90***	.94***	.98***
24.		.90***	.94***	.94***
25.		.92***	.85***	.94***
26.		.96***	.88***	.93***
27.		.90***	.89***	.95***
28.		.94***	.92***	.62***
29.		.97***	.89***	.96***
30.		.90***	.96***	.85***
31.		.92***	.95***	.90***
32.		.95***	.95***	.93***
33.		.88***	.95***	.91***
34.		.94***	.99***	.97***
35.		.96***	.97***	.91***
36.		.82***	.95***	.83***

*** $p < .001$

rater reliability of the two short forms of the WUSCTED that were used to assess ego development in this study.

Internal Consistency

The alpha coefficients of internal consistency for Form-A (items 1-18) and for Form-B (items 19-36) of the WUSCTED used in this study are presented in Table 9. Values range from .65 to .85. These data compare well with previous research (Hansell et al., 1985; Holt, 1980; Loevinger, 1979a; Loevinger & Wessler, 1970; Novy & Francis, 1992).

Main hypotheses

Hypothesis #1

It was predicted that elderly individuals who are currently volunteering will score higher on the trait of extraversion than individuals who were not initially volunteering at the start of the study. Extraversion differed significantly between the 2 groups at Time 1, $F(1, 101) = 7.21$, $p < .01$; at Time 2, $F(1, 101) = 7.75$, $p < .01$; and at Time 3, $F(1, 101) = 8.36$, $p < .01$. As predicted, current volunteers consistently scored higher than initial non-volunteers on extraversion. Current volunteers had significantly higher scores on extraversion than new volunteers at all 3 time points, while former and new volunteers did not significantly differ on extraversion.

Hypothesis #2

The second hypothesis is that current volunteers will have higher ego development than initial non-volunteers. To examine the relationship between volunteer status and ego development scores, an analysis of variance was performed on the final

Table 9

Alpha coefficients of internal consistency for versions A and B of the WUSCTED

Time 1:	Form-A: (N=103):	.85
Time 2:	Form-A: (n=51):	.78
	Form-B: (n=52):	.80
Time 3:	Form-A: (n=52):	.85
	Form-B: (n=51):	.65
Time 4:	Form-A: (n=42):	.81
	Form-B: (n=43) :	.83

sample of 103 participants' item sum scores of ego development.

The Repeated Measures MANOVA showed a main effect for volunteer status, $F(1, 101) = 11.11$, $p < .001$. Differences between current and initial non-volunteers were examined at each of the 3 time points. There was a main effect of volunteer status at Time 1, $F(1, 101) = 18.16$, $p < .001$; Time 2, $F(1, 101) = 6.40$, $p < .05$; and Time 3, $F(1, 101) = 4.40$, $p < .05$). As predicted, the current volunteers scored higher than the initial non-volunteers on ego development, and this difference persisted throughout the study.

Hypothesis #3

It was predicted that initial non-volunteers would increase in ego development after a six-month volunteer intervention. In addition, the impact of this volunteering intervention will be explored for current volunteers. It was predicted that individuals at the conformist (level 3) or self-aware (level 4) levels would be expected to either stay the same or increase in ego development whereas those at the conscientious level (level 5) or above would be expected to either stay the same or decrease. So the pattern of change over time was examined separately for those initially at the conformist and self-aware levels, and for those initially at the conscientious level or above.

Ego development is known to be related to fluency, and in this study the 2 variables were associated. In addition, ego development and years of education were associated in this study (Table 4). When assessing whether ego development changes over time, it would be valuable to examine change over time for that aspect of ego development not related to fluency nor to education.

To test the hypothesis that a volunteer experience would promote ego

development, a 2-way ANOVA was performed with repeated measures over time to examine changes in current and in initial non-volunteers' ego development scores across the 3 time points in the project (Table 5). The analysis showed no main effect for time, $F(2, 100) = 1.65$, $p = .20$. However, the analysis revealed a significant interaction between time and volunteer status, $F(2, 100) = 5.40$, $p < .01$.

Follow-up tests examined the significance of differences on ego development across time for current and initial non-volunteers separately. For the current volunteers, there was a significant main effect of time, $F(2, 27) = 3.68$, $p < .05$. Tests on the means revealed that current volunteers decreased on ego development from Time 1 to Time 2 (during the waiting period), $F(1, 28) = 7.02$, $p < .05$, and then remained stable on ego development from Time 2 to Time 3, $F(1, 28) = .12$, $p = .73$. For the initial non-volunteers, although ego development did not significantly change over time, a trend was found, $F(2, 72) = 2.86$, $p = .06$. Tests on the means revealed that initial non-volunteers' ego development scores remained stable from Time 1 to Time 2, $F(1, 73) = 1.18$, $p = .28$, and showed a trend to increase from Time 2 to Time 3, $F(1,73) = 2.94$, $p = .09$.

A 2-way ANOVA was performed with repeated measures over time, and fluency and education as the covariates, to examine changes in current and in initial non-volunteers' ego development scores across the 3 time points in the project. This adjusts for the possible contribution of fluency and education to participants' ego development scores at all 3 time points. The analysis showed no significant main effect for volunteer status, $F(1, 99) = 1.11$, $p = .30$, a trend for time, $F(2, 201) = 2.59$, $p = .08$, and a significant volunteer status by time interaction, $F(2, 201) = 7.38$, $p < .001$.

Differences between current and initial non-volunteers were examined at each of the 3 time points. At Time 1, there was a main effect for volunteer status, $F(1,97) = 7.92$, $p < .01$. However, this difference disappeared at Time 2, $F(1, 97) = .006$, $p = .94$, and at Time 3, $F(1, 97) = .67$, $p = .42$. The analysis showed that when adjusting for the possible contribution of fluency and education to ego development scores, current volunteers scored higher than initial non-volunteers on ego development at Time 1, but this difference disappeared at Times 2 and 3.

Follow-up tests examined the significance of differences on ego development across time for current and initial non-volunteers separately. For the current volunteers, there was no significant main effect of time, $F(2, 55) = 1.80$, $p = .18$. For the initial non-volunteers, ego development did significantly change over time, $F(2, 145) = 11.56$, $p < .001$). Tests on the means revealed that initial non-volunteers' ego development scores increased from Time 1 to Time 2, $F(1, 72) = 7.52$, $p < .01$), and from Time 2 to Time 3, $F(1,72) = 4.77$, $p < .05$. In sum, when adjusting for the contribution of fluency and education to ego development scores, for the initial non-volunteers, ego development increased from Time 1 to Time 2 and from Time 2 to Time 3.

Conformist (level 3) and self-aware (level 4). To examine whether a volunteer experience would promote ego development for those individuals at the conformist (n = 8) or self-aware (n = 36) levels (at Time 2), a 2-way ANOVA was performed with repeated measures over time to examine changes in current (n=8) and in initial non-volunteers' (n=36) ego development scores across the 3 time points in the project (Table 10). The analysis showed no significant main effect for volunteer status, $F(1, 42) = 1.57$,

Table 10

Mean Ego Development Scores for Times 1, 2, and 3, for conformist and self-aware (levels 3 and 4) at Time 2

Sample	Times			N
	1	2	3	
Total	86.38	85.11	88.18	44
Current volunteers	89.88	87.00	87.75	8
Initial non-volunteers	85.61	84.70	88.28	36

Mean Ego Development Scores for Times 1, 2, and 3, for conscientious (level 5) and above at Time 2

Sample	Times			N
	1	2	3	
Total	97.28	97.69	96.98	58
Current volunteers	101.52	98.43	98.62	21
Initial non-volunteers	94.87	97.27	96.05	37

Mean Ego Development Scores for Times 1, 2, and 3, for conformist and self-aware (levels 3 and 4) at Time 2, adjusting for the contribution of fluency and education to ego development

Sample	Times			N
	1	2	3	
Current volunteers	88.84	86.71	87.34	8
Initial non-volunteers	86.64	84.98	88.69	36

Mean Ego Development Scores for Times 1, 2, and 3, for conscientious (level 5) and above at Time 2, adjusting for the contribution of fluency and education to ego development

Sample	Times			N
	1	2	3	
Current volunteers	100.08	97.25	96.95	21
Initial non-volunteers	96.31	98.45	97.72	37

$p = .22$, a significant main effect for time, $F(2, 41) = 3.77$, $p < .05$, and no significant interaction between time and volunteer status, $F(2, 41) = 1.70$, $p = .20$. Follow-up tests on means revealed a significant increase between Time 2 and Time 3, $F(1, 43) = 16.92$, $p < .001$, and not between Time 1 and Time 2, $F(1, 43) = 2.60$, $p = .11$. Ego development scores increased between Time 2 and Time 3 for those scoring at the conformist or self-aware levels at Time 2.

When adjusting for the possible contribution of fluency and education to ego development scores, for those initially at the conformist and self-aware levels, the analysis showed no main effect for volunteer status, $F(1, 40) = .61$, $p = .44$, a main effect for time, $F(2, 83) = 3.32$, $p < .05$, and no interaction between time and volunteer status, $F(2, 83) = 1.67$, $p = .20$. Follow-up tests on means revealed a significant increase between Time 2 and Time 3, $F(1, 42) = 17.56$, $p < .001$, and not between Time 1 and Time 2, $F(1, 42) = .79$, $p = .38$. In sum, ego development scores increased between Time 2 and Time 3 for those scoring at the conformist or self-aware levels at Time 2, when adjusting for the possible contribution of fluency and education to ego development.

Conscientious (level 5) and above. To examine whether a volunteer experience would promote ego development for those individuals at the conscientious level or above, (at Time 2), a 2-way ANOVA was performed with repeated measures over time to examine changes in current ($n = 21$) and in initial non-volunteers' ($n = 37$) ego development scores across the 3 time points in the project (Table 10). The analysis showed a significant main effect for volunteer status, $F(1,56) = 4.31$, $p < .05$, no significant main effect for time, $F(2, 55) = .45$, $p = .64$, and showed a significant

interaction between time and volunteer status, $F(2, 55) = 4.63$, $p < .05$.

Differences between current and initial non-volunteers were examined at each of the 3 time points. At Time 1, there was a main effect of volunteer status, $F(1, 56) = 9.41$, $p < .01$, but this main effect disappeared at Time 2, $F(1, 56) = .50$, $p = .48$, and at Time 3, $F(1, 56) = 1.65$, $p = .21$. Current volunteers scored higher on ego development at Time 1, but there was no difference between current and initial non-volunteers at Times 2 and 3.

The pattern of change over time was examined separately for current and initial non-volunteers with follow-up tests. For current volunteers ($n = 21$), a 1-way ANOVA was performed with time as the repeated measure to examine changes in ego development scores across the 3 time points. The analysis showed no main effect for time, $F(2, 19) = 2.73$, $p = .09$. Similarly, for initial non-volunteers ($n = 37$), the analysis showed no main effect for time, $F(2, 35) = 2.48$, $p = .10$. Neither current nor initial non-volunteers' ego development scores changed across the 3 time points for those at the conscientious level or above.

When adjusting for the possible contribution of fluency and education to ego development scores, for those initially at the conscientious level or above, the analysis showed no main effect for volunteer status, $F(1, 54) = 1.05$, $p = .31$, no main effect for time, $F(2, 111) = .99$, $p = .37$, and a significant interaction between time and volunteer status, $F(2, 111) = 8.93$, $p < .001$. Follow-up tests examined the effects of time for current volunteers and initial non-volunteers separately. For the current volunteers, there was no significant main effect for time, $F(2, 39) = 1.75$, $p = .19$. For initial non-volunteers, the analysis showed a significant main effect for time, $F(2, 71) = 8.50$, $p <$

.001. Tests on the means revealed that initial non-volunteers' ego development scores increased from Time 1 to Time 2, $F(1, 35) = 15.58$, $p < .001$, and remained stable from Time 2 to Time 3, $F(1, 35) = .74$, $p = .40$. In sum, when adjusting for the contribution of fluency and education to ego development scores for those at the conscientious level or above, for the initial non-volunteers, ego development increased from Time 1 to Time 2 and then remained stable from Time 2 to Time 3.

Summary. Overall, the results show that those individuals initially at the conformist or self-aware levels of ego development do increase, while those higher on ego development remain stable as a result of the volunteer intervention.

Fluency. Since fluency was highly correlated with ego development (Table 4), a 2-way ANOVA was performed with repeated measures over time to examine changes in current and in initial non-volunteers' fluency scores across the 3 time points in the project. The analysis showed a significant main effect for volunteer status, $F(1, 101) = 7.04$, $p < .01$, a significant main effect for time, $F(2, 100) = 6.59$, $p < .01$, and no significant interaction between time and volunteer status, $F(2, 100) = .25$, $p = .78$. Overall, current volunteers had higher fluency scores than initial non-volunteers. Follow-up tests on the means revealed that participants' fluency scores decreased from Time 1 to Time 2, $F(1, 102) = 6.51$, $p < .05$, and then remained stable from Time 2 to Time 3, $F(1, 102) = 1.99$, $p = .16$.

Exploratory Analyses on Volunteer Experience

Volunteering extensiveness. An examination of the volunteer Lifetime Hours and the Weekly Hours variables indicate bimodal distributions. So, the continuous variable of

Lifetime Hours was converted into the dichotomous variable of Lifetime Hi/Lo using a median split. Individuals with 1615 hours or less of volunteering at Time 1 were considered low on this variable while individuals with 1667 hours or more were considered high. Similarly, Weekly Hours was changed to Week Hi/Lo. Those volunteering on average for less than 5 hours per week were considered low, while those volunteering at least 5 hours per week were considered high.

A one-way ANOVA was performed on ego development scores at Time 1, with Lifetime Hi/Lo as the independent variable, to see if those entering the study with greater amounts of volunteering were higher on ego development than those who had volunteered less. The results revealed no significant difference between those high and low on Lifetime hours, $F(1, 82) = .007$, $p = .93$.

A one-way ANOVA was performed on ego development scores at Time 4, with Week Hi/Lo as the independent variable, to see if those participants who were volunteering more at follow-up testing were higher on ego development than those who were volunteering less. The results revealed no significant difference between those high and low on Weekly Hours, $F(1, 69) = .03$, $p = .87$. In sum, the results revealed that having more hours of volunteer experience was not associated with higher ego development scores.

Exploratory Analyses on Gender

A two-way ANOVA was performed with time as the repeated measure to examine changes in males' and in females' ego development scores across the 3 time points in the project. The analysis showed no main effect for time, $F(2, 100) = 1.36$, $p = .26$, no main

effect for gender, $F(1, 101) = 1.15$, $p = .29$, and no significant gender by time interaction, $F(2, 100) = .90$, $p = .41$. Overall, males and females did not differ on ego development.

Non-Parametric Descriptions of Intra-Individual Change

To complement the analyses that assess whether ego development changes over time for a given sample, non-parametric analyses of intra-individual changes in ego development are also described. Intra-individual patterns of change in ego development are summarized in Tables 11 and 12. This examination of the data indicates that both stability and change occurred in ego development scores from Time 2 to 3. Individuals either stayed the same, or increased or decreased by one or two levels. Table 11 shows the ego development change scores between Times 2 and 3, and Table 12 shows the number and percentage of subjects showing no change, advancement, or regression in ego development between Time 2 and Time 3.

Overall, 50% showed no change in ego development, 31% increased, and 19% decreased in ego development from Time 2 to Time 3. Of participants at the self- aware level or below, 49% increased in ego development from Time 2 to Time 3, while 47% showed stability in ego development and only 4% decreased. In contrast, only 17% of those at the conscientious level or above increased in ego development. Statistical evaluation by chi-square examined the proportions of those at the self-aware level and below and those at the conscientious level and above by the proportions of those who decreased, increased, and remained stable on ego development. The proportions were different, $\chi^2 (2, N = 103) = 19.23$, $p < .001$, suggesting that change in ego development is related to initial ego level.

Table 11

Ego development change scores between Time 2 and Time 3 (N=103)

	Outcome				
	Decrease 1 or 2 levels		No change	Increase 1 or 2 levels	
Ego level at Time 2	2	1	0	1	2
1 Impulsive					
2 Self-Protective			1		
3 Conformist		1	2	3	2
4 Self-Aware		1	18	17	
5 Conscientious		11	23	8	
6 Individualistic		6	6	1	
7 Autonomous	1		1	1	
8 Integrated					
Total	1	19	51	30	2

Table 12

Number and percentage of subjects showing no change, advancement, or regression in ego stage development between Time 2 and Time 3

	Outcome					
	Decrease		No change		Increase	
Ego level at Time 2	n	%	n	%	n	%
Impulsive and Self-Protective			1	100%		
Conformist and Self-Aware	2	5%	20	45%	22	50%
Conscientious and above	18	31%	30	52%	10	17%
Total Sample	20	19%	51	50%	32	31%

Follow-up (Time 4)

At Time 4, one year after completing their volunteer intervention, participants completed a follow-up questionnaire package consisting of the same measures that were given at Times 1, 2 and 3, and an interview (Appendices L & M) was conducted to assess which people were still volunteering and if any benefits of volunteering were maintained in the long term. Eighty-five participants came into the lab for the interview and also completed the package of questionnaires, including the WUSCTED. Eleven were interviewed over the phone, for a total of 96 volunteers who were interviewed at Time 4.

Ego Development

To test whether ego development would remain stable or change, a 2-way ANOVA was performed with time as the repeated measure to examine changes in current and in initial non-volunteers' ego development scores from Time 3 to Time 4 (during the follow-up period).

The analysis showed no main effect for time, $F(1, 83) = 1.58$, $p = .21$, a trend for volunteer status, $F(1, 83) = 3.35$, $p=.07$, and no interaction between time and volunteer status, $F(1, 83) = .18$, $p = .67$. The test of significance indicated that overall, the participants' ego development scores did not change during the follow-up.

A two-way ANOVA was performed with time as the repeated measure, and fluency and education as the covariates, to examine changes in current and in initial non-volunteers' ego development scores from Time 3 to Time 4, adjusting for the possible contribution of fluency and education to participants' ego development scores. The analysis showed no main effect for volunteer status, $F(1, 81) = .63$, $p = .43$, no main

effect for time, $F(1, 82) = 1.31$, $p = .26$, and no interaction between time and volunteer status, $F(1, 82) = .08$, $p < .78$. In sum, when adjusting for the contribution of fluency and education to ego development scores, the participants' ego development scores did not change during the follow-up.

Conformist (level 3) and self-aware (level 4). The pattern of change during the follow-up was examined separately for those initially at the conformist and self-aware levels, and for those initially at the conscientious level or above. Of particular interest was to determine if the gains in ego development made by those at the conformist and self-aware levels were maintained after the completion of the volunteer project.

For those initially at the conformist and self-aware levels, the analysis showed no main effect for volunteer status, $F(1, 30) = .08$, $p=.78$, no main effect for time, $F(1, 30) = 1.43$, $p = .24$, and no interaction between time and volunteer status, $F(1, 30) = .95$, $p = .34$. Ego development scores remained stable during the follow-up for those initially at the conformist and self-aware levels.

When adjusting for the contribution of fluency and education to ego development scores, for those initially at the conformist and self-aware levels, the analysis showed no main effect for volunteer status, $F(1, 28) = .98$, $p = .33$, no main effect for time, $F(1, 29) = 1.19$, $p = .28$, and no interaction between time and volunteer status, $F(1, 29) = .39$, $p = .54$. Ego development scores remained stable during the follow-up for those initially at the conformist and self-aware levels when adjusting for the contribution of fluency and education to ego development scores.

Conscientious (level 5) and above. For those initially at the conscientious level or

above, the analysis showed no main effect for volunteer status, F (1, 50) = .90, p = .33, no main effect for time, F(1, 50) = .32, p = .58, and no interaction between time and volunteer status, F(1, 50) = .05, p = .83. Ego development scores remained stable during the follow-up for those initially at the conscientious level and above.

When adjusting for the contribution of fluency and education to ego development scores, for those initially at the conscientious level or above, the analysis showed no main effect for volunteer status, F(1, 48) = .05, p = .82, no main effect for time, F(1, 49) = .42, p = .52, and no interaction between time and volunteer status, F(1, 49) = 0.00, p = .99. Ego development scores remained stable during the follow-up for those initially at the conscientious level and above when adjusting for the contribution of fluency and education to ego development scores.

Interview Questions

Still volunteering. Of the 96 people interviewed at the Time 4 follow-up, 78 (81.2%) were still volunteering. Of the 78 people still volunteering, 78 (100%) said they planned to continue volunteering. Of the 29 current volunteers, 27 (93.1%) were still volunteering, and of these 27 current volunteers who were still volunteering, 27 (100%) said they planned to continue volunteering. Of the 67 initial non-volunteers interviewed, 51 (76.1%) were still volunteering, and of these 51 initial non-volunteers who were still volunteering, 51 (100%) said they planned to continue volunteering. The average hours per week of volunteering ranged from .5 to 33 hours per week, with an average of 7.9 hours per week.

Stopped volunteering. Of the 96 people interviewed, 18 (18.8%) had stopped

volunteering since Time 3. When these 18 were asked if they plan to resume volunteering in the future, 2 (11.1%) said No, 12 (66.7%) said Yes, and 4 (22.2%) said maybe or probably. When these individuals were asked why they had stopped volunteering, the two most common reasons were because there was no work for them at the organization (39%), and they had lost interest (22%).

An analysis of variance on ego development at the time of the follow-up (Time 4) revealed that those who were still volunteering did not differ in ego development from those who had stopped volunteering, $\underline{F}$ (1, 83) = .20, $\underline{p}$ = .66.

Other activities. Participants were asked if they had started any new activities other than volunteering in the last year (since Time 3). Fifty-five (57.3%) said No, while 41 (42.7%) said Yes. Of those participants still volunteering (N=78), 44 (56%) had not started any new activities, and 34 (44%) said they had started a new activity. Differences in the proportions of those who were still volunteering and those who had stopped volunteering by the proportions of those who had started a new activity and those who had not, were evaluated with chi-square analyses. The proportions were similar, χ^2 (1, $\underline{N}$ = 96) = .132, $\underline{p}$ = .72, suggesting that stopping volunteering is not related to starting a new activity other than volunteering.

Questions about volunteer experience. When participants were asked to tell the interviewer anything they would like about their volunteer experience, 23% of the participants gave factual information about a volunteer position, 21% told of an aspect of their volunteer experience related to personal growth, 15% mentioned aspects related to social relationships, 7% mentioned aspects related to altruism, 3% mentioned leisure

time, 5% mentioned other aspects, and 26% did not give an answer.

When participants were asked what they had learned as a result of being a volunteer, 17% mentioned communication and social skills, 17% mentioned they had learned about needs and services related to volunteering in the community, 12.5% mentioned specific skills, 12.5% mentioned satisfaction or well-being, 10.5% mentioned social contact, 9% mentioned gaining experience, 1% mentioned opportunities for involvement, 8% mentioned other aspects, and 12.5% did not give an answer or said they had not learned anything.

When the current volunteers were asked what they had learned as a result of participating in the project, 28% mentioned communication and social skills, 17% mentioned they had learned about needs and services related to volunteering in the community, 14% mentioned social contact, 7% mentioned opportunities for involvement, 7% mentioned specific skills, 7% mentioned satisfaction or well-being, 3% mentioned gaining experience, 3% mentioned other aspects, and 14% did not give an answer or said they had not learned anything.

When asked if there had been any effect of volunteering on their life, 29% of participants said that volunteering influenced them in the area of personal growth, 13.5% mentioned effects on their leisure time, 8% mentioned social relationship effects, 7% gave an altruistic effect, 7% said volunteering distracted them from their problems, 3% mentioned factual information about a volunteer position, 7% mentioned other effects, while 24% either did not give an answer or said there had been no effect.

When asked what was the most significant or important benefit of their volunteer

participation, 40% gave a benefit related to their personal growth, 21% said the most important benefit of their volunteering was the help given to others, 19% mentioned social relationship benefits, 8% mentioned leisure time benefits, 4% mentioned volunteering distracted them from their problems, and 7% mentioned other benefits.

When participants were asked about the degree of control they felt they had in designing their volunteer positions in the community, 9% said they felt they had no control, 47% said they felt they had moderate control, 33% said they felt they had high control, and 10% did not answer.

When asked how important this control was to their enjoyment of their positions in the community, 19% said it was not important, 20% said it was important, 31% said it was very important, and 30% did not answer

When the current volunteers were asked about the degree of control they felt they had in designing their volunteer positions within the project, 10% said they felt they had no control, 83% said they felt they had moderate control, 3.5% said they felt they had high control, and 3.5% did not answer.

When the current volunteers were asked how important this control was to their enjoyment of their positions in the community, 36% said it was not important, 21% said it was important, 18% said it was very important, and 25% did not answer.

Discussion

Personality and Volunteering

Current volunteers consistently scored higher than initial non-volunteers on extraversion, a finding that is consistent with personality trait theory and the results of previous research. It should be noted that all participants in this study had decided to pursue volunteer activity. However, for the initial non-volunteers, the decision to volunteer was precipitated by the intervention of the present study's recruitment appeal, while the current volunteers had already decided to pursue volunteering before the study recruitment. Future research could examine extraversion for a third group of seniors who had not been encouraged to volunteer or who had refused.

Ego Development and Volunteering

Current volunteers scored higher than the initial non-volunteers on ego development, and this difference persisted throughout the study. Even though at Time 3 the initial non-volunteers were actually no longer non-volunteers, but were volunteering, they continued to score lower than the current volunteers on ego development.

The third hypothesis, the main one of the study, investigated the impact of a volunteering intervention on the ego development of older adults who were either current or initial non-volunteers. The initial analyses suggested that the volunteering intervention did not have a significant impact on the ego development of current volunteers, nor of initial non-volunteers. Furthermore, during the 3 month waiting period, ego development scores decreased for current volunteers.

The decrease in ego development scores for the current volunteers during the

waiting period is puzzling. Perhaps the current volunteers had high hopes and expectations and were disappointed by having to wait 3 months before participating in the project. Perhaps the initial non-volunteers had fewer initial expectations and hence their ego development scores did not decrease. Bushe and Gibbs (1990) commented on the decline in ego development found in retests and suggested this occurs when people lose motivation and hence they may give more brief and cliched responses in contrast to the first administration when participants would have been clearly motivated to complete the sentences to the best of their abilities. Overall, we have no way of knowing whether participants obtained lower scores on the WUSCTED due to less interest.

Fluency, a measure of word count, could also be seen as a measure of the amount of effort put into completing the WUSCTED. Fluency scores decreased from Time 1 to Time 2, and then remained stable from Time 2 to Time 3, a pattern of change similar to that observed for the ego development scores for current volunteers. These results for fluency add support to the idea that participants' effort in completing the WUSCTED decreased. The fact that fluency decreased over time from Time 1 to Time 2 suggests that perhaps participants devote less effort to completing the sentences with repeated testing sessions, especially when they have just finished a 3 month waiting period.

The pattern of change over time was examined separately for those initially at the conformist and self-aware levels, and for those initially at the conscientious level or above. For those initially at the conformist and self-aware levels, ego development scores increased during the volunteer intervention. However, neither current nor initial non-volunteers' ego development scores changed across the 3 time points for those at the

conscientious level or above. The present study supported the hypothesis that for those at the lower levels of ego development, volunteering would have an impact on ego development, and that for those at the higher levels, the intervention would have no effect on ego development, not even for the initial non-volunteers. These findings are also consistent with previous research that points to a lack of growth in ego development above the self-aware level.

Perhaps individuals with high levels of ego development had high expectations regarding the project which may not have been challenging or uniquely meaningful for these individuals with more complex views of the world. Perhaps those at the higher end of ego development were not challenged by the volunteer intervention in such a way so as to promote ego development. While those with complex perceptions may have been disappointed by the intervention, those with less complex conceptions may have been stimulated or impressed by the volunteer intervention and hence did increase in ego development. Although splitting the sample at the self-aware and conformist levels has been justified on theoretical and methodological grounds, further research using larger samples should be able to examine finer distinctions in ego development.

Intra-individual change. Non-parametric analyses of intra-individual changes in ego development complemented the analyses of mean change over time. Overall, the results showed that half of our sample did not change over time in ego development while the rest of the sample either increased or decreased over time. Adams and Fitch (1982) suggest looking beyond the orthogenetic principle of human development which states that individuals move to more integrated and differentiated stages of development. They

point out that ego development may undergo both growth and regression as forms of change. The data in the present study supports the concept of change as taking the form of both growth and regression.

Considering those participants at the higher ego development levels, although 31% decreased and 52% remained stable, 17% did increase in ego development. This pattern of results suggests there is still a theoretical impetus to consider different contexts and longer interventions before it can be concluded that higher ego development individuals never increase. Considering those individuals at the self-aware and conformist levels, about half of the individuals increased in ego development and half remained stable. Although volunteering did have an impact on ego development, half of these individuals did not increase. Considering the sample as a whole, volunteering facilitated personality growth among some people, but perhaps volunteering is not an optimal condition for personal growth for everybody, regardless of their initial ego development level. Perhaps only some individuals can gain from the experience of volunteering.

It is unlikely that these findings can be explained in terms of a regression to the mean since most of those at the higher levels did not decrease in ego development. Moreover, the pattern of development for those at the higher levels reflects stability as well as change. While 31% of those at the higher levels of ego development did decrease, half of these participants remained stable and 17% even increased. Moreover, those at the lower levels of ego development did not all increase. While about half of those at the lower levels of ego development did increase, the other half remained stable.

Follow-up

Overall, participants' ego development scores did not show any change one year after completing their volunteer intervention. That is, any gains in ego development were maintained without any impact of our project. It is particularly interesting to note that the gains in ego development made by those initially at the conformist or self-aware levels were maintained. A substantial proportion (81%) of our sample were still volunteering and it is possible that this continued volunteering helped to maintain the gains in ego development. However, at follow-up testing, those who were still volunteering did not differ in ego development from those who had stopped volunteering, suggesting that ego development levels remained stable regardless of whether individuals are volunteering.

The follow-up interview results indicate that many volunteers attested to the benefits of volunteering and reported significant personal and professional changes in themselves as a result of the program, such as increased self-esteem, and commitment to volunteering. It is worthwhile noting that many of the changes experienced by the volunteers could not be captured by the measure of ego development.

Normative Comparisons of Levels of Ego Development.

The absence of norms for different age groups prevents a comprehensive comparison of the ego development levels of this elderly sample with norms. However, Holt (1980) published national U.S. norms for people between the ages of 16 and 25. Overall, he found 19% to be at the conformist level, 40% at the self-aware level, and 17% at the conscientious level. With the sample in the present study, 12% were at the conformist level, 31% at the self-aware level, and 36% at the conscientious level.

It is possible that the apparent representation by our elderly sample at higher levels (particularly for the conscientious level) than Holt's (1980) sample of 16-25 year olds attests to an effect of age. Although age alone does not account for the individual's progression through the stages, Loevinger has implied that age may be a necessary but not sufficient condition for reaching the higher stages.

Ego Development and Fluency

The results suggest that the sentence completion test measures a construct that is partially based on verbal fluency. Loevinger's scoring paradigm assigns higher ego levels to sentences with conceptual complexity which requires the expression of diverse ideas. To the extent that an individual repeats the same idea using different words, fluency would not be sufficient to indicate a higher ego level. However, when an individual expresses new ideas with additional words, these additional words are necessary for the expression of conceptual complexity and fluency is necessary for the expression of higher ego levels. Fluency is not sufficient at the lower ego levels but is a necessary condition for the expression of higher ego levels.

The impact of the volunteer intervention is evident regardless of whether fluency is controlled which suggests that the relationship between volunteering and ego development is not determined by the fluency of the responses.

Limitations

The generalizability of the results and conclusions of the present study are bound by the study's limitations. The present study did not assess informal volunteering such as help given to friends or neighbours which also constitutes a voluntary productive activity.

Although such informal help can be included in the definition of volunteering, the results of the present study are limited to formal, organizational volunteering.

The representativeness of the population sampled by the present study warrants mention. Individuals were predominantly anglophone and of middle socio-economic status. The agencies from which the volunteers were recruited may not have been representative of agencies in the community and therefore may have limited the individuals sampled.

Summary and Implications

Perhaps the personality trait of extraversion present since early adulthood influenced the individuals to seek volunteering experiences which then had an impact on that aspect of personality that is theoretically amenable to change across the life-span. The present longitudinal research measured the effect of a volunteering experience on ego development and demonstrated that ego development can change as a result of a volunteering intervention for a sample of elderly adults.

The theoretical question of whether elderly individuals can develop a fundamental aspect of their personality as a result of new experience is compelling. The proposed research has theoretical implications for the understanding of the nature of personality in the older adult as well as of those experiences in adulthood that promote ego development. Trait theorists who maintain that personality is stable from early adulthood will be challenged by the development of an aspect of personality. The possibility of continued personality development in a sample of elderly adults will increase our understanding of the potential for growth and development in the elderly. This is

especially important given the opportunities for healthy elderly adults to enjoy a variety of unique and challenging experiences by volunteering.

The present study explored change in ego development in relation to the specific context of volunteering. It would also be interesting to follow a sample across the adult years and observe the trajectory of ego development in response to life events and challenges.

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Appendix A

Consent Form for Current Volunteers at Time 1

CONSENT FORM

Date_____

I am willing to participate in SENIOR V.I.P. (Senior Volunteer Involvement Project). I will complete a series of questionnaires in which I will be asked about volunteering and my personal experience. This usually takes about one hour and a half to complete, and will be repeated twice more in about a nine month period. My participation in this project will include working part-time as an Expert Volunteer for at least nine months for three hours per week. I understand that all information obtained in this study will be treated completely confidentially, that I am free to discontinue my participation in the project at any time and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix B

Consent Form for Initial Non-Volunteers at Time 1

CONSENT FORM

Date_____

I am willing to participate in SENIOR V.I.P. (Senior Volunteer Involvement Project). I will complete a series of questionnaires in which I will be asked about volunteering and my personal experience. This usually takes about one hour and a half to complete, and will be repeated twice more in about a nine month period. Also, my participation in this project will include working as a volunteer for at least six months, for a minimum of three hours per week, in a position that I will have found through the Senior V.I.P. Program. This position will start in about 3 months. I understand that all information obtained in this study will be treated completely confidentially, that I am free to discontinue my participation in the project at any time and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix C

Consent Form for Current Volunteers at Time 2

CONSENT FORM

Date_____

I am willing to continue participating in SENIOR V.I.P. (Senior Volunteer Involvement Project). I will complete a series of questionnaires in which I will be asked about volunteering and my personal experience. This usually takes about one hour and a half to complete, and will be repeated once more in about six months. My participation in this project will include working part-time as an Expert Volunteer for at least nine months for three hours per week. I understand that all information obtained in this study will be treated completely confidentially, that I am free to discontinue my participation in the project at any time and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix D

Consent Form for Initial Non-Volunteers at Time 2

CONSENT FORM

Date_____

I am willing to continue participating in SENIOR V.I.P. (Senior Volunteer Involvement Project). I will complete a series of questionnaires in which I will be asked about volunteering and my personal experience. This usually takes about one hour and a half to complete, and will be repeated once more in about six months. Also, my participation in this project will include working as a volunteer for at least six months, for a minimum of three hours per week, in a position that I will have found through the Senior V.I.P. Program. This position will start in the following weeks. I understand that all information obtained in this study will be treated completely confidentially, that I am free to discontinue my participation in the project at any time and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix E

Consent Form for Current Volunteers at Time 3

CONSENT FORM

Date_____

I am willing to continue participating in SENIOR V.I.P. (Senior Volunteer Involvement Project). I will complete a series of questionnaires in which I will be asked about volunteering and my personal experience. This usually takes about one hour and a half to complete. My participation in this project has included working part-time as an Expert Volunteer for about six months. I will continue working part-time as an Expert Volunteer for at least three more months for three hours per week. I understand that all information obtained in this study will be treated completely confidentially, that I am free to discontinue my participation in the project at any time and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix F

Consent Form for Initial Non-Volunteers at Time 3

CONSENT FORM

Date_____

I will complete a series of questionnaires in which I will be asked about volunteering and my personal experience. This usually takes about one hour and a half to complete. My participation in this project has included working part-time as a volunteer in the community for about six months. I understand that all information obtained in this study will be treated completely confidentially, and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix G

Consent Form for Current Volunteers and Initial Non-Volunteers at Time 4

CONSENT FORM

Date_____

I am willing to participate in this follow-up to the SENIOR V.I.P. (Senior Volunteer Involvement Project). I will be asked several questions about my volunteer experience as well as about other activities. In addition, I will complete a series of questionnaires in which I will be asked about my personal experience. This usually takes about one hour and a half to complete. I understand that all information obtained will be treated completely confidentially, and that I can choose not to answer individual questions.

_____ _____

Signature Witness

Appendix H

The Washington University Sentence Completion Test of Ego Development, short version A

Hy & Loevinger, 1996

Now please read and fill out this sentence completion form.
You see that there is a list of incomplete sentences.
Please finish each incomplete sentence in any way you wish.
Please make sure you have completed all the sentences.

1. When a child will not join in group activities

2. Raising a family

3. When I am criticized

4. A man's job

5. Being with other people

6. The thing I like about myself is

7. My mother and I

8. What gets me into trouble is

9. Education

10. When people are helpless

11. Women are lucky because

12. A good father

13. A girl has a right to

14. When they talked about sex, I

15. A wife should

16. I feel sorry

17. A man feels good when

18. Rules are

Appendix I

The Washington University Sentence Completion Test of Ego Development, short version B for women

Hy & Loevinger, 1996

Now please read and fill out this sentence completion form.
You see that there is a list of incomplete sentences.
Please finish each incomplete sentence in any way you wish.
Please make sure you have completed all the sentences.

1. Crime and delinquency could be halted if

2. Men are lucky because

3. I just can't stand people who

4. At times she worried about

5. I am

6. A woman feels good when

7. My main problem is

8. A husband has a right to

9. The worst thing about being a woman

10. A good mother

11. When I am with a man

12. Sometimes she wished that

13. My father

14. If I can't get what I want

15. Usually she felt that sex

16. For a women a career is

17. My conscience bothers me if

18. A woman should always

Appendix J

The Washington University Sentence Completion Test of Ego Development, short version B for men

Hy & Loevinger, 1996

Now please read and fill out this sentence completion form.
You see that there is a list of incomplete sentences.
Please finish each incomplete sentence in any way you wish.
Please make sure you have completed all the sentences.

1. Crime and delinquency could be halted if

2. Men are lucky because

3. I just can't stand people who

4. At times he worried about

5. I am

6. A woman feels good when

7. My main problem is

8. A husband has a right to

9. The worst thing about being a man

10. A good mother

11. When I am with a woman

12. Sometimes he wished that

13. My father

14. If I can't get what I want

15. Usually he felt that sex

16. For a women a career is

17. My conscience bothers me if

18. A man should always

Appendix K

The NEO Five Factor Inventory

Costa & McCrae (1989)

NEO

There are not "right" or "wrong" answers. Please read each item carefully and circle the answer which corresponds best to your opinion. Answer every item. If you change your mind please erase. Remember, there are not right or wrong answers.

1. I am not a worrier.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

2. I like to have a lot of people around me.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

3. I don't like to waste my time daydreaming.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

4. I try to be courteous to everyone I meet.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

5. I keep my belongings clean and neat.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

6. I often feel inferior to others.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

7. I laugh easily.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

8. Once I find the right way to do something, I stick to

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

9. I often get into arguments with my family and co-workers.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

10. I'm pretty good about pacing myself so as to get things done on time.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

11. When I'm under a great deal of stress, sometimes I feel like I'm going to pieces.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

12. I don't consider myself especially "light-hearted".

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

13. I am intrigued by the patterns I find in art and nature.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

14. Some people think I'm selfish and egotistical.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

15. I am not a very methodical person.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

16. I rarely feel lonely or blue.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

17. I really enjoy talking to people.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

18. I believe letting students hear controversial speakers can only confuse and mislead them.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

19. I would rather cooperate with others than compete with them.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

20. I try to perform all the tasks assigned to me conscientiously.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

21. I often feel tense and jittery.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

22. I like to be where the action is.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

23. Poetry has little or no effect on me.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

24. I tend to be cynical and sceptical of others' intentions.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

25. I have a clear set of goals and work toward them in an orderly fashion.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

26. Sometimes I feel completely worthless.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

27. I usually prefer to do things alone.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

28. I often try new and foreign foods.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

29. I believe that most people will take advantage of you if you let them.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

30. I waste a lot of time before settling down to work.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

31. I rarely feel fearful or anxious.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

32. I often feel as if I'm bursting with energy.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

33. I seldom notice the moods or feelings that different environments produce.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

34. Most people I know like me.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

35. I work hard to accomplish my goals.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

36. I often get angry at the way people treat me.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

37. I am a cheerful, high-spirited person.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

38. I believe we should look to our religious authorities for decisions on moral issues.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

39. Some people think of me as cold and calculating.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

40. When I make a commitment, I can always be counted on to follow through.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

41. Too often, when things go wrong, I get discouraged and feel like giving up.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

42. I am not a cheerful optimist.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

43. Sometimes when I am reading poetry or looking at a work of art, I feel a chill or wave of excitement.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

44. I'm hard-headed and tough-minded in my attitudes.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

45. Sometimes I'm not as dependable or reliable as I should be.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

46. I am seldom sad or depressed.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

47. My life is fast-paced.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

48. I have little interest in speculating on the nature of the universe or the human condition.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

49. I generally try to be thoughtful and considerate.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

50. I am a productive person who always gets the job done.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

51. I often feel helpless and want someone else to solve my problems.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

52. I am a very active person.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

53. I have a lot of intellectual curiosity.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

54. If I don't like people, I let them know it.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

55. I never seem to be able to get organized.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

56. At times I have been so ashamed I just wanted to hide.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

57. I would rather go my own way than be a leader of others.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

58. I often enjoy playing with theories or abstract ideas.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

59. If necessary, I am willing to manipulate people to get what I want.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

60. I strive for excellence in everything I do.

1	2	3	4	5
strongly disagree	disagree	neutral	agree	strongly agree

Appendix L

Time 4 Interview

for Current Volunteers

TIME 4 INTERVIEW for Current Volunteers

1- Is there anything you feel we should know or anything you'd like to tell me about your volunteer experience either at Senior V.I.P. or in the community?

2- a- Have you learned anything as a result of participating in Senior V.I.P.?

b- Have you learned anything as a result of being a volunteer?

3- Has there been any effect of volunteering on your life, in general?

4- What would you say is the most significant or important benefit of your volunteer participation?

5- Are you still volunteering?

Yes_____ No_____

If No,

a- are you planning to do volunteer work in the future?

b- why did you stop volunteering?

If Yes,

a- do you plan to continue?

b- how many hours do you volunteer each week?

c- are you still volunteering in the same position(s) in the community as you were while volunteering at Senior V.I.P.?

-Yes_____

-No_____

-dropped one or more positions since T-3 but still in

at least one same position_____

6- Have you started volunteering in any other volunteer positions in the last 11 months?

Yes_____ No_____

7- Have you started any new activities other than volunteering in the last 11 months?

Yes_____ No_____

If Yes,
-what is this new activity?

8- a- To what extent do you feel that you had some degree of control in designing your volunteer position in the community? How important was this to your enjoyment?

b- To what extent do you feel that you had some degree of control in designing your volunteer position within Senior V.I.P.? How important was this to your enjoyment?

9- How important is volunteering to you on a scale of 1-5 where 1 is least and 5 is most?

1	2	3	4	5
Not important	somewhat important	moderately important	quite important	very important

Appendix M

Time 4 Interview

for Initial Non-Volunteers

TIME 4 INTERVIEW for Initial Non-Volunteers

1- Is there anything you feel we should know or anything you'd like to tell me about your volunteer experience either at Senior V.I.P. or in the community?

2- Have you learned anything as a result of being a volunteer?

3- Has there been any effect of volunteering on your life, in general?

4- What would you say is the most significant or important benefit of your volunteer participation?

5- Are you still volunteering?

Yes_____ No_____

If No,

a- are you planning to do volunteer work in the future?

b- why did you stop volunteering?

If Yes,

a- do you plan to continue?

b- how many hours do you volunteer each week?

c- are you still volunteering in the same position you found through Senior V.I.P.?

-Yes_____

-No_____

-dropped one or more positions since T-3 but still in at least one same position_____

6- Have you started volunteering in any other volunteer positions in the last 11 months?

Yes_____ No_____

7- Have you started any new activities other than volunteering in the last 11 months?

Yes_____ No_____

If Yes,
-what is this new activity?

8- To what extent do you feel that you had some degree of control in designing your volunteer position in the community? How important was this to your enjoyment?

9- How important is volunteering to you on a scale of 1-5 where 1 is least and 5 is most?

1	2	3	4	5
Not important	somewhat important	moderately important	quite important	very important