

A Study of Current, Former, and New Elderly Volunteers:
A Comparison of Developmental and Trait models of
Personality

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ABSTRACT

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This study examined relationships among personality, ego development, and volunteering among retired seniors for current, former, and new volunteers. The variables included volunteer experience (volunteer extensiveness and volunteer history status) and volunteer status, personality, ego development, the control variables of social desirability and fluency and the demographic variables of age, gender, education and marital status. The results showed that openness to experience was not related to either measure of volunteer experience and current, former, and new volunteers did not differ. Extraversion correlated with both measures of volunteer experience and current volunteers were more extraverted than new volunteers. Extensiveness of volunteer experience was unrelated to ego development but a volunteer history was associated with higher ego development. Current volunteers had higher levels of ego development than former and new volunteers, and former volunteers had higher levels than new volunteers. The difference in ego development between current and new volunteers remained with social desirability, education and fluency as individual and

simultaneous covariates. The difference between current and former volunteers persisted with social desirability as a covariate. The difference between former and new volunteers disappeared with covariates. Openness to experience and ego development were positively associated. Multiple regression analysis indicated that openness and both measures of volunteer experience positively predicted ego development, when entered before fluency in the regression equation. Ego development and agreeableness were positively associated only when controlled for education; ego development and extraversion were positively associated when fluency, education, and social desirability were controlled. This study supported the hypothesis that ego development is related to volunteering and suggests that participation in volunteer work promotes ego development.

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A STUDY OF CURRENT, FORMER AND NEW ELDERLY VOLUNTEERS:
A COMPARISON OF DEVELOPMENTAL AND TRAIT MODELS OF
PERSONALITY.

The purpose of the present study was to examine the relationships among a trait model of personality, ego development, and volunteering among retired seniors. The first hypothesis was that current volunteers are more open to experience and more extraverted than new volunteers. The second hypothesis was that current volunteers have higher levels of ego development than new volunteers. The third hypothesis was that openness to experience and ego development are positively related. The fourth hypothesis was that volunteering experience and openness to experience positively influence ego development. Finally, exploratory analyses examined the relationships between neuroticism, extraversion, conscientiousness, agreeableness and ego development, and between volunteering and neuroticism, agreeableness and conscientiousness.

Theoretical Orientation for Volunteerism

Activity theory (Havighurst & Albrecht, 1953; Havighurst, Neugarten, & Tobin, 1968) posits that maintaining the activity levels of middle age protects the health and the well-being of retired seniors. The central assumption is that productive activities help retired seniors to compensate for the loss of the structure and roles of earlier adult years such as paid employment and

parenting.

Activity theory's premise of a positive impact of activity on well-being has found support by research as reviews of the literature indicate (reviewed by Larson, 1978; Barrus-Bammel & Bammel, 1985). For example, Markides and Martin (1979) found that activity level predicted life satisfaction. Physical and mental health were higher for seniors who maintained higher activity levels (DeCarlo, 1974). Regular rather than intermittent activity was associated with life satisfaction (Bley, Goodman, Dye & Harel, 1972) and with physical and mental health (DeCarlo, 1974). Loss of social roles and structure has been found to be associated with decreased life satisfaction (Lemon, Bengtson and Peterson, 1972) but productive activities among retired seniors can help reverse the decline in well-being that is related to a reduction of activity and role loss (Allredge-Marshall, 1983; Riley & Foner, 1968; Whitted, 1983).

According to Activity theory, activities must be self-selected, rewarding, and perceived as valuable in order to positively influence well-being. It appears that it is the quality rather than the quantity of activities that is associated with life satisfaction (Hoyt, Kaiser, Peters, & Babchuk, 1980). Recent statements of Activity theory (Herzog & House, 1991) have incorporated Control theory and emphasize the active role of the individual in choosing his

or her environment and activities. The degree of choice and control held by individuals over the activities they choose are said to be central to aging well. Herzog and House (1991) suggest that it is the maintenance of activity in preferred ways that is associated with benefits to health and well-being and with a sense of competence. Herzog and House (1991) point out that activities that are discontinued from the younger adult years may be related to age-related roles while the productive activities that are continued are chosen by the individual and are free of role restraints such as those related to work and family.

A study by Herzog, House and Morgan (1990) found health and well-being to be at higher levels when working individuals had more freedom and choice about whether to work and about their work schedules. Herzog and House (1991) believe that increasing retired older adults' choice and control over the activities that they undertake may benefit health and life satisfaction. The implication is that activities undertaken by retired individuals may be beneficial to health and well-being when these individuals are active in the way and to the extent that they want to be. Reis and Gold (1993) point out that personal control and life satisfaction in the context of retirement are linked.

Volunteering is a productive activity that provides seniors with roles and structure in their retirement years

(Newman, Vasudev, & Onawola, 1985) and an objective to work towards through organizational involvement (Fengler, 1984). Volunteering is seen as one type of activity that can help to fill the supposed gap left by retirement. Furthermore, volunteering is an activity through which individuals can have an impact on their community. The decision to volunteer is also a personal choice over which the individual has control and involves individuals actively seeking out opportunities to help (Snyder 1993).

The literature has supported a positive association between activity levels and life satisfaction. Similar results would be expected in the context of the specific activity of volunteering. As one way of enabling older adults to acquire meaningful social roles, it would be expected that volunteer activity would have a positive impact on life satisfaction. However, the results of the literature on the association between volunteering and life satisfaction are inconsistent. Overall, reviews of the literature (Chambre 1987; Fischer and Schaffer, 1993) conclude that while some studies have shown a positive association between volunteering and life satisfaction, others have failed to show an association.

For example, Hunter and Linn (1980-81) examined whether elderly volunteers have higher levels of psychosocial adjustment than elderly non-volunteers. The results revealed that volunteers were in better health than

non-volunteers. Furthermore, elderly volunteers had lower levels of somatization, anxiety, depression and higher levels of will to live and life satisfaction than elderly non-volunteers.

Newman, Vasudev, & Onawola (1985) examined the effects of elderly volunteers' perceptions of their volunteer experiences on their well-being. The sample consisted of 180 older volunteers ranging in age from 55 to 85 years. The majority of volunteers perceived that volunteering improved their life satisfaction and their feelings about themselves. The volunteers also perceived that their volunteering gave a meaningful structure to their lives, provided enrichment, and improved the volunteers' self-esteem. Bond (1982) found volunteer status to be a significant predictor of life satisfaction.

However, other research has found no association between volunteering and life satisfaction (McLaughlin 1983), and no differences in life satisfaction between volunteers and non-volunteers (Kornblum, 1981; Newman, Vasudev, & Baum, 1983 as reviewed by Fischer & Schaffer 1993). Perhaps the benefits of volunteering are specific to certain types of volunteering and for individuals who are at risk or lacking resources. Fengler (1984) examined the relationship between life satisfaction and volunteerism among individuals aged 65 and over. The findings revealed that volunteering is positively associated with life

satisfaction for elderly individuals who are lacking resources or are otherwise disadvantaged.

Although some research does point to an association between volunteering and life satisfaction, directional hypotheses need to be tested since correlational data is not sufficient to support a hypothesis that states that higher levels of activities such as volunteering lead to higher levels of well-being. More research is needed to clarify the direction and nature of the relationship between activities such as volunteering and well-being.

Levels of Volunteering among Elderly Individuals

Despite the fact that volunteering is a productive activity that provides seniors with roles and structure in their retirement years, the data do not point to higher rates of volunteering for retired adults, who would be expected to have more free time, than for other age groups.

Fischer and Schaffer (1993) point out that levels of volunteering have been increasing for all adult age groups. In the United States, over the past 25 years, the number of elderly volunteers has increased. The Marriott Senior Volunteerism Study (Marriott Senior Living Services and the U.S. Administration on Aging, 1991) found 42%, 46%, 45%, 39% and 27% of older adults in the U.S. had been involved in volunteer activity in the past year for adults aged 60 - 64, 65 - 69, 70 - 74, 75 - 79, and 80 and over, respectively. In comparison, in 1965, only 11% of

individuals over the age of 65 had volunteered in the previous year (U.S. Department of Labor, 1965). Rates of volunteering are also increasing for younger age groups in the United States. In 1965, 18% of all adults were volunteering (U.S. Department of Labor, 1965) compared to 54% in 1990 (Independent Sector).

Although volunteering is increasing among retired seniors, levels are also increasing among adults overall. Consequently, levels of volunteering are not higher for retired seniors than for other age groups. A survey by the Independent Sector (1990) found that in the U.S., 47% of individuals between the ages of 65 and 74, and 32% of individuals aged 75 and over were volunteering compared to 54% of all adults.

Canadian data indicates lower rates of volunteering in Canada than in the U.S. The 1992 Canadian survey on Aging and Independence reports that 21% of individuals aged 45 to 64 are involved in volunteer activity, while the same proportion (20%) of individuals over age 65 volunteer (Statistics Canada, 1992). However, the Canadian data are based on a general survey of activities and not on a representative survey of volunteering. The differences in Canadian and U.S. data might be influenced by methodological differences.

Fischer and Schaffer (1993) reviewed a variety of studies and concluded that there is a curvilinear

relationship between age and volunteering with lower rates of volunteering for younger and older adults. They suggest that the decline in volunteering is occurring at later ages and now occurs after age 75. Thus it appears that over the last 30 years, rates of volunteering are increasing among older adults and the decrease is occurring at later ages. However, older individuals do not have higher rates of volunteering than younger adults. In fact, the highest rates of volunteering are found for middle-age adults suggesting that it is people who are involved with work and family, rather than those who are retired, who are more likely to volunteer.

Retired individuals who have objectively more free time do not necessarily fill this free time with structured activities such as volunteering. Rather, volunteering seems to be part of a generally active lifestyle with volunteers participating in a variety of activities. In fact, a strong predictor of an individual's volunteer status is his or her involvement in a variety of social or leisure activities (Chambre, 1987).

A survey in the United States by the Independent Sector (1988) found that while 75% of individuals believed that people should volunteer, only 33% of individuals surveyed actually reported being currently involved in any volunteer activity. Moreover, 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). It seems that people's actions are not always consistent with their beliefs and attitudes. The question of inaction is particularly salient for retired seniors who have more free time than those still in the work force, and the discrepancy between desired and actual amount of volunteering suggests that recruitment efforts by volunteer agencies may be useful and appreciated.

Snyder (1993) suggests that global personality dispositions may help explain why some people do get involved in volunteer work, and why others remain inactive. McCrae and Costa have elaborated a theory of personality traits that are stable throughout the adult life span. They define traits as "generalized dispositions that endure over time" (1984, p.45). Costa and McCrae's theory posits that these enduring personality traits form the basis for adaptation to life events and generally for conducting our lives. Indeed a review by Reis and Gold (1993) points out that "stable personality traits could be connected to stability or continuity in life satisfaction, in work and retirement" (p. 262). The suggestion that personality variables impact volunteerism among retired seniors is consistent with the theory of stable personality structures throughout adulthood.

Personality and Volunteering

The area of volunteering consists of a variety of types of volunteers such as individuals who are presently volunteering (current volunteers), those who are just starting volunteer activity (new volunteers), those who have volunteered in the past but are currently not volunteering (former volunteers) and individuals who have never volunteered (non-volunteers). Furthermore, volunteer placement programs involve several stages for the new volunteer, starting with the initial general decision to do volunteer work, followed by the searching for and the pursuit of a specific volunteer position, and then finally the commitment to a specific position.

Researchers have been investigating personality as a predictor of volunteerism for at least twenty years and have focused on the comparison between actual and non-volunteers. Research in the area of personality and volunteering has not compared different types of volunteers at different stages of the volunteer process (e.g. comparing individuals at the stage of making their first commitment to volunteer work with same age group individuals who have a history of volunteering).

Monk and Cryns (1974) studied the variables that correlate with voluntaristic action commitment by comparing individuals who indicated such interest with those who did not. Significant differences emerged for 11 of the 32

variables studied, including the belief that one can make a difference, "contribution to the well-being of others", and social-communal interests. Monk and Cryns suggest that these two variables are a manifestation of ego maturation and integrity. They conceptualize their findings in terms of Erickson's framework suggesting that the individuals who chose to volunteer seemed to "express a capacity for self-transcendent generativity" and that volunteering can be interpreted as a manifestation that this stage of the life cycle has been resolved.

Howarth (1976) compared the personality characteristics of volunteers and non-volunteers. A sample of female volunteer workers at various organizations was compared with a student and a normative sample on Howarth's (1972) personality questionnaire. The results of this study found the volunteers to be less anxious than the students. The volunteers were more trusting, more persistent, and were more conscientious (referring to the activation of one's conscience, the conviction that one should help others) than both the student and the normative samples. There were no differences between the volunteer sample and the other two samples on sociability and ascendance.

Howarth (1976) further investigated the personality characteristics of volunteers by dividing the volunteer sample into four age groups, 21-30, 31-40, 41-50, and 51-

60. The results showed that all four age groups were similar on sociability and did not differ from the student and the normative samples on this measure. Anxiety fluctuated with the age of the volunteers, and for all four age groups was lower for the volunteers than for the student and normative samples. Conscientiousness was higher in the older volunteers. The youngest volunteers were similar in conscientiousness to the normative sample, but were higher than the students in conscientiousness. Trust fluctuated with the age of the volunteers and all four age groups were more trusting than the student and normative samples. Howarth suggests that the key characteristic of volunteers is their lack of anxiety and their high levels of conscientiousness. Conscientiousness emerged as the most important personality factor in the prediction of why people volunteer.

Personality factors have been investigated as predictors of helping behaviour. Smith and Nelson's (1975) objective was to examine a broad range of personality factors for a sample of volunteers and non-volunteers in order to assess the usefulness of personality factors in predicting helping behaviour. Smith and Nelson administered Cattell's Sixteen Personality Factor Questionnaire (16PF; Cattell, Eber, & Tatsuoka, 1970) to 571 volunteers and to 699 non-volunteers. Volunteers were male rescue squad members or members of Big Brothers

organizations. Non-volunteers were individuals from a state-wide probability sample. The results revealed significant differences between volunteers and non-volunteers on 7 personality dimensions. Volunteers were more outgoing, happy-go-lucky, venturesome, scored higher on superego strength, and were less shrewd, self-sufficient, and liberal than non-volunteers. Smith and Nelson suggest that the differences between volunteers and non-volunteers on the outgoing, happy-go-lucky, venturesome, and shrewd factors point to an extraverted personality for the volunteers.

Smith and Nelson (1975) also examined the personality correlates of the sample of volunteers and non-volunteers, controlling for the effects of several demographic variables. Age was the only variable to emerge as a significant control variable. The samples were split into those 40 years and younger, and those 41 years and older. For the older sample, volunteers scored higher on superego strength, and venturesomeness, and were less shrewd than non-volunteers. For the younger sample, volunteers scored lower on liberalism than non-volunteers. These results suggest that there may be a personality profile unique to the older volunteer.

Herzog and Morgan (1993) analyzed data from the Americans' Changing Lives (ACL) survey, conducted in 1986. Introversiion-extraversiion and neuroticism were measured

with the Eysenck Personality Inventory (EPI; Eysenck & Eysenck, 1964). Extraversion was found to be related to actual participation in volunteer work as well as to the number of hours spent volunteering. Neuroticism was negatively related to volunteer participation but was unrelated to the number of hours spent volunteering.

Other research in the area of personality and formal volunteering has compared volunteers with non-volunteers, and successful with unsuccessful volunteers. The aim of this type of research is to identify variables that will predict success or failure so successful candidates can be identified. Spitz and MacKinnon (1993) compared adults who had successfully completed a volunteer program with those who had not on the Cattell Sixteen Personality Factor Questionnaire. Participants ranged in age from 17 to 49 years. Success was defined as having not dropped out of a Big Brothers-Big Sisters program. Results showed that successful volunteers had higher scores on intelligence (general potential, abstract thinking), trust (an attitude of trust and acceptance), imagination (more imaginative and possibly less concerned with everyday mundane issues), self-assurance, and venturesomeness, and successful volunteers were older and more educated.

The review of the research points to a clear connection between personality variables and volunteering. First, research supports the common assumption that

volunteers are concerned about helping others as they tend to have social-communal interests and to believe they could contribute to others' well-being (Monk & Cryns, 1974) and to be conscientious defined as believing they should help others (Howarth, 1976). Several key personality dimensions emerge as predictors of volunteering. It is clear that volunteers tend to have lower levels of anxiety than non-volunteers (Howarth, 1976; Herzog & Morgan, 1993), to have characteristics indicative of extraversion (Smith & Nelson, 1975; Herzog & Morgan, 1993; Spitz & MacKinnon, 1993) and to have characteristics indicative of intellect and imagination (Spitz & MacKinnon, 1993). The relationship between personality and volunteering is consistent with theory of stable personality dimensions. However, as McCrae and Costa note, "there is fundamental division on what exactly is meant by personality" (1984, p.7). There are two distinct but complementary approaches to the study of personality, the dimensional and the developmental approaches.

Overview of the Five Dimensions of Personality

The dimensional approach conceptualizes personality in terms of individual differences on a collection of traits or essentially independent variables. Individuals are said to differ quantitatively on each dimension or continuum. Self-report inventories are frequently used to assess and measure personality by trait theorists.

The prevalent model of personality is the five factor model which postulates that five dimensions comprise the adult personality. Costa and McCrae's NEO Five Factor model (1980) of personality suggests that five domains, (a) neuroticism, (b) extraversion, (c) openness to experience, (d) agreeableness and (e) conscientiousness encompass most of the variability of personality. The NEO Five Factor Inventory (NEO-FFI; Costa & McCrae, 1989), a shortened version of the NEO Personality Inventory (NEO-PI; Costa & McCrae, 1985), measures these personality dimensions. Costa and McCrae's theory stems from a history of theory and research attempting to identify the central structures of personality. The five factor model has roots in other personality inventories and its dimensions receive support, in the form of convergent and divergent validity, from the pattern of correlations of the five NEO dimensions with other constructs.

Neuroticism. Neuroticism contrasts adjustment with emotional instability and is sometimes referred to as general anxiety as it is composed of emotions that interfere with adaptation. This dimension is comprised of the facets of anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability.

Factor analysis of Cattell's Sixteen Personality Factor Questionnaire (16PF) revealed three groups of scales, including neuroticism (Costa & McCrae, 1976).

Costa and McCrae's Neuroticism scale correlated .75 with the Eysenck Personality Inventory Neuroticism scale and -.05 with the EPI Extraversion scale (Costa & McCrae, 1985). Guilford-Zimmerman Temperament Survey (GZTS; Guilford, Zimmerman, & Guilford, 1976) indices of Emotional Health have been shown to correlate negatively with the NEO Neuroticism dimension (Costa & McCrae, 1985).

Extraversion. Extraversion assesses the desire for quantity and intensity of interpersonal interaction, activity level, need for stimulation, and capacity for joy. This dimension is composed of warmth, gregariousness, assertiveness, activity, excitement-seeking, and positive emotions. Extraversion refers to one's sociability as well as one's assertiveness. The NEO model maintains that the opposite of extraversion is not introversion, but rather is the absence of the extraversion traits. Therefore, introverts are reserved rather than unfriendly and prefer to be alone rather than are depressed.

The second group of scales revealed by factor analysis of Cattell's Sixteen Personality Factor Questionnaire (16PF) was the construct of extraversion (Costa & McCrae, 1976). The NEO and EPI Extraversion scales correlate .69 and NEO extraversion facets do not show correlations above .30 with EPI neuroticism. GZTS Extraversion scales correlated positively with NEO-PI Extraversion scales.

Openness to experience. The NEO-FFI measures a third

group of traits measuring intellectual brightness, imaginativeness, tender-mindedness and liberal thinking (Costa and McCrae 1976). Openness to experience assesses proactive seeking and appreciation of experience for its own sake. This dimension refers to the tendency to be curious about both the inner and the outer world and to experience both positive and negative emotions more intensely. There is an unconventionality typical of the open individual who is willing to entertain new ideas and question authority. Individuals low on openness tend to be more conventional and prefer the familiar to the novel. This dimension is represented by the facets of fantasy, aesthetics, feelings, actions, ideas, and values.

The third group of scales revealed by factor analysis of Cattell's Sixteen Personality Factor Questionnaire (16PF) measured intellectual brightness, imaginativeness, tender-mindedness, and liberal thinking (Costa & McCrae, 1976). This construct is similar to Rokeach's (1960) construct of dogmatism which contrasts closed vs open individuals. Based on this dimension, Costa and McCrae (1978) developed their experience inventory measuring openness in the areas of fantasy, aesthetics, feelings, actions, ideas and values. This dimension would evolve into their openness to experience dimension. The NEO Openness scale does not correlate with the Neuroticism, Extraversion or Lie scales of the EPI, suggesting, as Costa

and McCrae point out, that their openness dimension measures an aspect of personality not represented by the EPI. The NEO Openness to ideas subscale of the openness to experience dimension correlated with the GZTS Thoughtfulness scale. Costa and McCrae (1989) report that NEO openness to experience scores were correlated with Guilford's (1967) measure of divergent thinking which is scored for fluency, flexibility and originality. None of the other NEO dimensions were associated with this measure of divergent thinking, supporting the discriminant validity of this dimension.

Hogan (1983) suggested that open individuals are likely to be non-conformists. Indeed, Costa and McCrae (1980) found open individuals to be less bound by rules and to reject traditional family ideologies (1978). McCrae and Costa (1985) report a correlation of .30 between openness and IQ scores but maintain that intelligence and openness are clearly distinguishable constructs and that one may encourage the other.

Agreeableness. Agreeableness assesses the quality of one's interpersonal orientation along a continuum from compassion to antagonism, referring to the positive or negative orientation towards others. The agreeable individual is trusting, cooperative and sympathetic and altruistic. Individuals low on this dimension are disagreeable, competitive and sceptical of others.

Conscientiousness. Conscientiousness assesses the individual's degree of organization, persistence, and motivation in goal-directed behaviour. This dimension refers to the tendency to be hardworking and responsible. Individuals low on conscientiousness would be hedonistic and pleasure seeking. This definition of conscientiousness differs from Howarth's (1976) definition of conscientiousness as the conviction that one should help others, an altruistic motivation.

Costa and McCrae (1989) report that their constructs of agreeableness and extraversion can be measured by Wiggins's Revised Interpersonal Adjective Scale (IAS-R; Wiggins, Trapnell & Phillips, 1988). Wiggins developed an interpersonal plane with individuals high or low on the dimension of love/warmth and high or low on status/assertiveness. Costa and McCrae (1989) suggest that agreeable individuals are high on the love dimension but low on the status dimension while extraverted individuals are high on both the love and status dimensions. The opposite pole of the agreeable dimension is antagonism, a negative orientation toward others, while the opposite pole of the extraversion dimension is the absence of sociability and assertiveness.

Developmental Perspectives on Personality: Loevinger's Theory and Measure of Ego Development

In contrast to the trait or dimensional approach, the

stage or developmental approach to the study of personality posits personality descriptions that appear at different developmental stages. Loevinger's conception of ego development is at the centre of this approach to the study of personality. Loevinger describes ego development as that aspect of the mind or personality that organizes and integrates the individual's experiences and tendencies. McCrae and Costa (1980) state that "ego functioning organizes all aspects of personality" (p. 1180). Loevinger (1976) states that "the striving to master, to integrate, to make sense of experience is...the essence of the ego" (p. 59).

Ascribing to ego development such an organizational function suggests a complex construct, rather than a unitary dimension. This multiplicity is reflected in the history of ego development which is derived from many constructs. The ego has been equated with Adler's construct of Style of Life, and 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). Fingarette (1963) defined the ego as the search for meaning.

Sullivan (1953) was the first to offer a conception of ego development that was amenable to measurement, the self-system. Sullivan, Grant and Grant (1957) referred to the

concept as "interpersonal integration" and developed the construct of "I-levels," the coding system still used by Loevinger for her stages. Various related terms have been advanced. 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 the 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).

The theory of ego development and the construction of the scoring manual evolved based on preliminary work with a prepublication scoring manual. Loevinger's theory and measurement of ego development began with a four-point scale of ego development, based on the work of Sullivan, Grant, and Grant (1957), but ultimately Loevinger and her colleagues believed that their data were more completely represented by a nine point scale. Loevinger's model of ego development postulates six qualitatively distinct developmental stages (denoted by symbols "I" and "Δ" in her

nomenclature) and three transitional stages (denoted by "/"). Loevinger still retains her original I-level notation to reflect the derivation of her construct from Sullivan. Her stages start at I-2, reflecting her convention that there is a first stage of ego development that is too chaotic and undeveloped and that is inaccessible by sentence completions. The presence of transitional stages in her model reflects the development of her construct which started with four stages. As she added more stages, some seemed appropriately placed between already existing stages, hence the label "transitional". Loevinger postulates specific qualitative differences between her stages and since her stages progress in a hierarchical sequence, higher stages reflect higher levels of ego development. The theory, however, makes no statements regarding the amount of quantitative differences between the stages. Consequently, the differences between the full stages are not necessarily greater than the differences between a full and neighbouring transitional stage as would be implied by her notation. The transitional stages merely reflect later additions to her model.

An important aspect of Loevinger's theory concerns the sequentiality of the ego development levels. Loevinger posits that individuals proceed through the stages of ego development in an invariant hierarchical sequence, and cites cross-sectional increases in ego development with age

as evidence for the sequentiality of her stages. Empirical findings from cross-sectional studies of children, adolescents, and young adults suggest an increase in ego level with increasing age (Loevinger & Wessler, 1970; Loevinger, 1979; Hauser, 1976). However, the age groups examined by these studies do not include those beyond young adulthood. Loevinger's theory is more concerned with differences within age cohorts than between them, and unlike other stage theorists such as Erickson 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. Moreover, it is theoretically possible to have the highest levels of ego development represented within each age cohort including adolescents or young adults. Empirical studies show that within a given age cohort, a wide range of levels of ego development can be observed (Holt, 1980; Redmore & Loevinger, 1979).

The nine stages of ego development are outlined by Loevinger and Wessler (1970) and can be described in terms of (a) impulse control and character development, (b) interpersonal style, (c) conscious preoccupations, and (d) cognitive style or complexity.

Individuals at the first stage, called the impulsive stage, (I-2) categorize the world into polar opposites such as good or bad, and are demanding, primitive and

undifferentiated. At the second stage, the self-protective level (Δ), 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 third stage, the transition from self-protective to conformist, called ritual-traditional, ($\Delta/3$) individuals are obedient and conform to simple social norms and absolute rules, including traditional sex roles, and are concretistic, earnest, and concerned with cleanliness and respectability. At the fourth stage, the conformist level (I-3), 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 fifth stage, the transition from conformist to conscientious or self-aware level (I-3/4), 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 sixth stage, the conscientious level (I-4), individuals display what Loevinger calls true conceptual complexity. The individual "not only displays complex thinking but also perceives complexity" (Loevinger and 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 seventh stage, the transition from conscientious to autonomous (I-4/5), 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 eighth stage, the autonomous level (I-5), 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 ninth stage, the integrated level (I-6), 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 (I-4) level, descriptions are cumulative.)

The instrument developed by Loevinger and her colleagues to assess the nine stages of ego development is the Washington University Sentence Completion Test of Ego Development (WUSCTED; Loevinger & Wessler, 1970). This measure requires the individual to complete 36 sentence stems. Loevinger explains that in measuring ego development, the strategy is to identify qualitative

differences in the successive stages of ego development. Each sentence completion item is scored by matching it against the sequence of qualitatively different stages and assigning it to the developmental level it most closely matches. For each protocol therefore there is a distribution of 36 item ratings. A composite score or Total Protocol Rating (TPR) is derived for each individual by applying an algorithm provided in the scoring manual to the distribution of ego levels for the stems. The theory of ego development assumes that each individual has some level of core functioning and that this level of core functioning is reflected in this total protocol rating.

Connections between Trait and Developmental approaches to the study of Personality

The organizational function of ego development suggests a multidimensional construct, rather than a unitary dimension. A better understanding of the concept is provided by an examination of the overlap between ego development and the five personality dimensions in Costa and McCrae's model. McCrae and Costa (1980) outline the theoretical connections, or lack thereof, between the construct of ego development and (a) neuroticism, (b) extraversion and (c) openness to experience.

Neuroticism. There is no conceptual link between neuroticism and ego development. Loevinger and Wessler (1970) state that there is no reason to assume the best

adjusted are those with the highest ego levels. Indeed, another study by McCrae and Costa (1983) later demonstrated that well-being was not associated with higher ego levels. Rather, it would be expected that people with higher levels of ego development have more complex views of the world and therefore have more complex problems with which to cope.

Extraversion. Overall, the construct of ego development, would not be expected to be related to extraversion. The roots of ego development are in Sullivan's concept of interpersonal integration and indeed Loevinger states that one of the aspects of ego development concerns interpersonal relatibility. However, while sociability is what is meant by the extraversion dimension, higher ego development would involve more complexity of interpersonal relationships rather than more sociability. McCrae and Costa (1980) point out that sociability is not encompassed within Loevinger's theory.

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) examined the relationship between Loevinger's ego development model of personality and their NEO trait approach to personality. Specifically, they investigated whether openness to experience is empirically associated with ego development for a sample of 240 males, ranging in age from 35 to 80

years, from the normative aging study.

McCrae and Costa's construct of openness to experience "refers to a willingness to take in different facets of experience" (1980, p. 1180). For Rogers (1961), openness is "the ability to symbolize in awareness all aspects of experience" (p. 1181). Rokeach's (1960) "content free" dogmatism is a type of authoritarianism that is conceptually the opposite of open-mindedness.

The function of the ego is to make sense of experience which implies an association with being open to experience. McCrae and Costa (1980) reviewed the characteristics found among individuals at the higher ego levels (Loevinger and Wessler, 1970) that would be expected among individuals scoring high on the dimension of openness to experience: self-evaluated standards, toleration, concern for communication, differentiated feelings, psychological causation of behaviour, conceptual complexity, broad scope, and tolerance of ambiguity.

While McCrae and Costa (1980) expect measures of openness to experience and ego development to be conceptually related, they point out that the two constructs are also conceptually different. While openness is a continuous dimension, ego development is a series of qualitatively distinct stages. Furthermore maturity and impulse control are aspects of ego development that are not expected to be relevant to openness.

McCrae and Costa (1980) report that seven of the ten measures of openness to experience positively correlated with ego development level and conclude that open individuals are higher in ego level. McCrae and Costa point out that the correlations were small, supporting their contention that openness is only a part of ego level and that ego development and openness to experience are only partially overlapping constructs.

Agreeableness. The individual at the positive pole of this interpersonal dimension is trusting, cooperative, sympathetic and altruistic and has a positive orientation towards others. These characteristics would not be expected at the lower levels of ego development, however they are not sufficient to constitute higher ego levels. The construct of ego development consists of more than an interpersonal dimension as higher levels require conceptual complexity and tolerance of ambiguity.

Conscientiousness. There is an overlap in the terminology used by Costa and McCrae and Loevinger. The NEO dimension of conscientiousness resembles the will to achieve and includes traits such as organization and persistence. Conscientiousness is also the term denoted by Loevinger to describe the stage of ego development where the individual is not bound by external rules for their own sake but rather lives his or her life according to self-evaluated standards. Clearly, the constructs described by

this term differ for Loevinger and Costa and McCrae. By conscientiousness Loevinger means the "self-evaluation of rules in terms of their position in the person's own belief system" (1994, 5), which is different to Costa and McCrae's dimension resembling a will to achieve.

Loevinger (1994) argues that the personality dimension of conscientiousness is similar to her conformity stage, citing the work of Goldberg (1990) who included adjectives such as "conventional" and "traditional" in his conception of conscientiousness and "nonconforming" and "unconventional" as adjectives describing the opposite pole of this dimension. However, it seems more plausible that Costa and McCrae refer to something other than conformity in their conception of conscientiousness, referring rather to a will to achieve.

The term conscientiousness as used by Loevinger and by Costa and McCrae refers to two constructs distinct from each other and from conformity. Loevinger's conscientiousness stage refers to an evaluation of rules in terms of one's own internal standards, while Costa and McCrae's dimension of conscientiousness refers to a determination or a will to achieve.

Conformity. Other studies have compared personality measures with Loevinger's measure of ego development. Hoppe and Loevinger (1977) found a curvilinear relation between conformity and ego development with the highest

conformers at the middle stages of ego level and the individuals reporting the least conformity at the lowest and the highest stages of ego development. For a sample of adolescents, Lorr and Manning (1978) found that individuals who were at the higher stages of ego development were tolerant, rule free, psychologically minded, sensitive and not closed-minded.

Social competence and ego development, two aspects of psychological development, seem to have different pathways of development. Ego development is promoted by growth in cognitive complexity, tolerance of ambiguity, individuation, and autonomy. On the other hand, social maturity emphasized conformity with social norms and acting in ways that reduce friction (Helson and Wink, 1987). Clearly, the progression to higher ego levels involves constructs different to conformity such as individuation and autonomy.

Loevinger's concept of ego development has some conceptual roots in the authoritarian personality research. Browning (1983) explains that Loevinger (1962) postulated that impulsive individuals were at the lower end of ego development, authoritarian people in the middle, and flexible, differentiated individuals at the higher levels of ego development. If individuals who are either impulsive or flexible have lower levels of authoritarianism, then ego development should have a curvilinear relationship with

authoritarianism. The results of this investigation revealed a moderate relationship between ego development and authoritarianism. Scores on two scales designed to measure aggressive aspects of authoritarianism were lower for the lower stages of ego development, peaked at the conformist stage and then decreased for the higher ego levels. A scale measuring traditional views of the masculine role correlated negatively with ego development while a scale measuring feminist attitudes was positively associated with ego development.

It would seem that the construct that resembles an openness to new ideas, toleration of ambiguity, and rejection of traditional rules seems to be the opposite of conformity and resembles Costa and McCrae's openness to experience and would seem to be negatively associated with Loevinger's conformity stage. More open individuals would be expected to be less moralistic, less bound by rules and ascribing less to a traditional family ideology. This relates Loevinger's conformist stage not with the personality dimension of conscientiousness, as she suggests, but rather with the dimension of openness to experience.

In sum, although the dimensional and the stage model approaches to the study of personality are fundamentally different in their inherent assumptions about the nature of personality, similarities do exist between Loevinger's

construct of ego development and some dimensional conceptions of personality.

A model of Stability of Personality vs a model of Change

McCrae and Costa (1990) 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. A six year longitudinal study (Costa & McCrae 1988) of the NEO PI show correlations ranging from .55 to .87, attesting to the absence of age-related changes in personality and the absence of maturational effects for each of the five dimensions of personality.

However, researchers have begun to examine the relation between personality and the environment. Helson (1993) suggests that there is sufficient evidence for some types of personality change in adulthood so that both a model of change and of stability should be studied. Helson says that research should specify the nature and amount of change, and under which conditions and at which life stages changes in personality may occur.

An alternative conception of personality defines it in terms of the experiential self that depends on social roles and relationships that inevitably do change over time. Helson conceives of personality as an organization of motivations and considers the influence of the social

world in the change of this organizational structure. When personality is defined so closely in relation to the environment, it is not surprising that Helson advocates for research that attempts to understand the social world or life experiences and that delineates specific hypotheses about change. While Costa and McCrae have concentrated on showing the absence of age-related or maturational changes in personality, they have not attempted to prove the absence of change in relation to specific environments. Helson is suggesting that personality be examined for possible change in relation to the environment.

Helson (1993) reviewed her own research and demonstrated three types of change: (a) normative change observed for an entire sample, (b) change associated with different personality types and (c) change associated with roles. Curvilinear change occurred in the California Psychological Inventory (CPI; Gough, 1987) masculinity/femininity scale in cross-sectional and longitudinal samples aged 21, 27, 43, and 53 (Helson 1992). Since this change was observed for the entire sample, Helson cites it as evidence of normative change.

Personality change across the life span seems to follow different patterns for different personality types. Different patterns of change between ages 21 and 43 were found for three subtypes of self-directed women on the self-versus-object directedness dimension of the CPI. The

willful group showed an increase in well being and functioning from ages 21-27 but then declined in areas of effective functioning while the hypersensitive and autonomous groups increased across these ages (Wink, 1991, 1992). This shows a different pattern of progression for different personality types.

Finally, Helson (1993) describes data that shows that women who became mothers between the ages of 21 and 27 had increased self control, responsibility and tolerance but decreased confidence and sociability. Helson and Picano (1990) show that women who followed the traditional path had increased in over-control and had not increased in dominance or independence by age 43, while other groups did not show this pattern. The data show how certain environments can influence the direction of psychological growth. In fact, Helson suggests that these differences are theory-relevant since they are consistent with theoretical statements of effects of the homemaker role.

Overall, Helson demonstrates change on certain psychological dimensions. Her conclusions are tied to specific environments and do not point to maturational changes in personality but rather to changes associated with certain life experiences. Conversely, Costa and McCrae's conclusions regarding the stability of personality focus on the absence of change in relation to age or maturation effects but they do not challenge or test their

theory in relation to specific life events, environments or life stages.

However, Helson's measures of personality are so different to Costa and McCrae's that her data do not challenge their theory of stable personality dimensions but rather add to it by delineating under what conditions psychological change may occur. Perhaps by grouping Helson's measures, ego development, and the NEO dimensions all under the term "personality" needless debate is encouraged. Rather, by accepting that different constructs are being measured by the different theorists, conclusions from both sides can be considered.

The Stability of Ego Development

It is unclear whether Loevinger is an environmentalist who conceptualizes personality as a function of the environment or a developmentalist who sees ego development as unfolding naturally. She is probably a combination of the two, seeing the environment as speeding up or slowing down a natural developmental progression. 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 (1976) suggests that it is due to such stability of adult environments that change in ego development is not common in adulthood and ego development represents a stable

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

Some research supports Loevinger's contention that most ego development occurs as individuals mature from childhood through early adulthood. Longitudinal studies ranging from 2 to 6 years, showed either stability or progression in ego level over time for adolescents and young adults (Redmore & Loevinger, 1979). Redmore (1983) found increases in ego level over 4 years for two samples of college students. Short term interventions (several weeks or less) were not successful in inducing a change in ego level for children nor for adults (Loevinger (1979)). These findings support the view that ego development occurs before adulthood, and shows that short-term experiences are not sufficient for ego development.

Other research supports Loevinger's contention that ego development may progress in adulthood as a result of sufficient theory-relevant intervention. Some longitudinal studies of ego development have been conducted and there is some evidence for ego development change after early adulthood. Bursik (1991) reported an increase in ego level in the context of adaptation to divorce and White (1985) in the context of a theory relevant intervention. White studied the ego development of 165 women ranging in age from 23 to 59 in a six-month nurse practitioner training program where responsibility and autonomy were central to the program. The results revealed that individuals at the self-aware level or below stayed at the same level or increased in ego level. Those at the conscientious level or above either stayed the same or decreased in ego level. Thus, it appears that individuals at 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; they were already at ego development levels that consisted of responsibility and autonomy.

It would seem then, that another theoretical difference between the dimensional and the developmental approach to personality concerns the stability of the structure of personality. The trait theorists hold that the structure of personality is inherently a stable one

that guides and assimilates life experiences. It would seem however, 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. 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.

This is consistent with the theory and finding that openness to experience is associated with ego development. Perhaps individuals who are open to experience are able to perceive their environments more entirely or structure their lives so they would be exposed to a variety of experiences. Individuals low on the construct of openness to experience may be resistant to new experiences and therefore never face the challenge of new environments. 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. An alternative to this method of adaptation or dealing with the environment is to accommodate to the environment and develop new internal schemas. When a

stable environment is found, there is no reason to expect internal personality change.

The theory of an ego development that may change through the adult years is not in contrast to Costa and McCrae's theory of a stable personality. Costa and McCrae's conception of personality by definition refers to internal structures that influence how individuals adapt to life events and in fact may determine the events they choose which then in turn reinforce the initial personality organization. Ego development, to a certain extent, describes a construct different from the five dimensions of personality. Since the theory regarding the inherent stability of ego development is ambiguous, research is needed to test specific hypotheses of theory relevant change in ego development.

It would be expected that individuals scoring higher on the stable personality construct of openness to experience would have a richer variety of experiences than individuals scoring lower on this construct. In turn, individuals who have encountered challenging environments might be expected to have higher ego development levels as a result of negotiating and adapting to these more complex environments.

The activities chosen in the retirement years may be less restrictive than activities chosen based on age related roles in the younger years. The potential exists

for the older adult to encounter challenging environments never before encountered in their earlier years. Choice is important in the adaptation to aging and in maintaining competence and the retirement years offer a unique opportunity for the elderly individual to participate in activities that he or she chooses. Elderly individuals are actively choosing their environments and "adjusting behaviors and aspirations in order to maintain a sense of competence in a changing environment" (Herzog and House, 1991, p.52). The implication is that elderly individuals may choose environments in which they can be successful and competent. The elderly individual who chooses to engage in volunteer activities can be provided with exciting challenges and with opportunities for many new meaningful experiences.

Cross-sectional differences between new and current volunteers on NEO dimensions would support the conclusion that these traits led to the volunteer activity. Therefore the conclusion could be made that personality variables are predictors of volunteering. If change is found between new and current volunteers on ego development, it could either be because of the effect of volunteering on ego development or it could be that having higher ego development led to the volunteering. Although Loevinger may never delineate her theoretical position on this matter, a longitudinal research program that examines pre and post scores on ego

development before and after a specific intervention would help elucidate the nature of ego development. However, the present cross-sectional study will be unable to resolve this question.

Hypotheses

The relationship between the NEO dimensional approach to personality and volunteering is addressed in hypotheses 1 and 4. The relationship between the ego developmental approach to personality and volunteering is addressed in hypotheses 2 and 4. Hypothesis 3 addresses a specific prediction concerning ego development and a personality dimension. Finally, exploratory analyses examine further relationships between personality dimensions and ego development and between personality and volunteering.

Hypothesis #1. Based on personality trait theory and the results of previous research, it can be hypothesized that high scores on the dimensions of openness to experience and extraversion increase the likelihood of volunteering. It is assumed that being more open to experience exposes the elderly individual to new experiences such as volunteering. Similarly, it can also be predicted that extraversion increases 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 volunteering experience would be positively associated with

the trait dimensions of openness to experience and extraversion and that elderly individuals who are currently volunteering will score higher on the trait of openness to experience and on the trait of extraversion than individuals who have never volunteered.

It should be noted that all participants in this study had decided to pursue volunteer activity. However, for the new volunteers, the decision to volunteer was precipitated by the intervention of the present study's recruitment appeal. Consequently, it can be hypothesized that scores on the traits of openness and extraversion would be lower for these individuals than for current volunteers who had already decided to pursue volunteering before the study's recruitment.

Hypothesis #2. The second hypothesis is based on the assumption that volunteering provides a unique opportunity for personality growth among elderly individuals. It is hypothesized that volunteering experience would be positively associated with ego development. It is also hypothesized that elderly individuals who are currently volunteering will have higher ego development than elderly individuals who have never volunteered.

Hypothesis #3. Based on the theoretical links between ego development and openness to experience, and the empirical findings of Costa and McCrae (1980) it is hypothesized that ego development and openness to

experience will be positively associated for a sample of elderly individuals.

Hypothesis #4. Taken together, these three hypotheses postulate that the stable trait dimension of openness to experience and ego development are positively related to the unique experience of volunteering and that ego development and openness to experience are positively related. It is hypothesized that openness to experience and volunteer experience contribute to ego development. These variables will be examined in terms of delineating their contribution in the prediction of ego development.

Exploratory analyses. The relations among ego development, and the NEO traits of neuroticism, extraversion, conscientiousness and agreeableness, and volunteering, will be explored.

Summary of Hypotheses. The theoretical model underlying these hypotheses is that openness to experience and extraversion as stable personality traits will predict volunteer activity which in turn may influence ego development. Direct relationships between personality traits and ego development are also expected. Analyses will be performed controlling for the demographic variable of education, for a socially desirable style of responding, and for the fluency of the sentence completions.

Method

Participants

Participants in this study were 104 men and women, aged 55 to 82, retired and living in the Montreal area. These individuals were participating in a larger project, The Senior Volunteer Involvement Project (SVIP), whose aim is to study and increase volunteering among retired seniors. Participants were recruited through a variety of agencies that work with people over the age of 55, e.g. retirement clubs, community centres, volunteer organizations and through advertisements placed in newspapers. Individuals were asked if they would like to participate in a study designed to examine volunteering among retired seniors. Three groups of participants were recruited. Current volunteers (N=37) are individuals who are currently volunteering in the community with a non-profit organization, for a minimum of three hours per week for at least three months. Former volunteers (N=36) 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 (N=31) are individuals who have never volunteered.

Differences between the three groups of participants.

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 and level of education, and marital

status. Differences in proportions of males and females, married and unmarried, and completed levels of education between the three groups of participants were evaluated with chi-square analyses, while mean differences in age and in years of education were assessed with univariate analyses of variance.

Table 1 shows the proportions of males and females in the current, former, and new Volunteer groups. Statistical evaluation by chi-square showed that the proportions of men and women in each of the three groups were similar, $\chi^2 (2, N = 104) = .160, p = .923$. Table 2 shows the proportions of presently married and unmarried individuals in the current, former, and new Volunteer groups. Statistical evaluation by chi-square showed that the proportions of married and unmarried individuals in each of the three groups were similar, $\chi^2 (2, N = 104) = 1.32, p = .52$. Table 3 shows the proportions of individuals in the current, former, and new Volunteer groups who have completed various levels of education. Statistical evaluation by chi-square showed that the proportions of individuals who have completed elementary, high school, CEGEP, and the B.A., M.A., and Ph.D. degrees in each of the three groups were similar, $\chi^2 (10, N = 104) = 15.16, p = .13$.

Table 1

Cross-Tabulation of Volunteer Status with Gender (N=104)

Gender	Volunteer Status		
	Current	Former	New
Male	10.6	9.6	9.6
Female	25.0	25.0	20.2

Note: Cell numbers indicate percentage of total sample

χ^2 (2, N = 104) = .160, p = .923 (NS)

Table 2

Cross-Tabulation of Volunteer Status with Marital Status
(N=104)

Marital Status	Volunteer Status		
	Current	Former	New
Married	21.2	16.3	14.4
Unmarried	14.4	18.3	15.4

Note: Cell numbers indicate percentage of total sample

χ^2 (2, $N = 104$) = 1.32, $p = .52$ (NS)

Table 3

Cross-Tabulation of Volunteer Status with Level of Education (N=104)

Level of Education	Volunteer Status		
	Current	Former	New
Elementary	1.0	1.0	1.9
High School	9.6	9.6	8.7
CEGEP	1.9	9.6	10.6
B.A.	14.4	10.6	5.8
M.A.	7.7	3.8	1.9
Ph.D.	1.0	0	1.0

Note: Cell numbers indicate percentage of total sample

$\chi^2 (10, N = 104) = 15.16, p = .13 (NS)$

An analysis of variance on participants' age (table 4) at the time of testing revealed that current, former, and new volunteers did differ in age at the time of completing the test package, $F(2, 101) = 6.34, p < .01$. Post hoc follow up tests, using the Tukey procedure found current volunteers ($M = 69.62, SD = 5.59$) to be significantly older than new volunteers ($M = 64.68, SD = 6.85$) and than former volunteers ($M = 65.81, SD = 5.87$) at the time of testing.

An analysis of variance on the number of years of education completed by participants (table 4) revealed that current, former, and new volunteers had different amounts of education, $F(2, 101) = 4.93, p < .01$. Tukey post hoc follow up tests revealed that current volunteers ($M = 15.84, SD = 3.61$) had completed more years of education than new volunteers ($M = 13.36, SD = 3.08$).

Overall, these preliminary analyses show some differences in demographic variables between the three groups of participants with the current volunteers being older, and having completed more years of education than the new volunteers and being older than both former and new volunteers.

Procedures

Recruitment procedures differed for the current compared to the new and former volunteers and are outlined below.

Table 4

Descriptive statistics and univariate analyses of variance for demographic variables and correlates of Ego Development, for entire sample (N=104), Current (N=37), Former (N=36), and New (N=31) Volunteers.

Measure	Mean	Standard deviation	Range	N	F
<u>Age</u>					6.34**
Entire Sample	66.83	6.39	55.00 - 82.00	104	
Current	69.62	5.59	58.00 - 82.00	37	
Former	65.81	5.87	56.00 - 80.00	36	
New	64.68	6.85	55.00 - 80.00	31	
<u>Years of Education</u>					4.93**
Entire Sample	14.70	3.37	6.00 - 22.00	104	
Current	15.84	3.61	7.00 - 22.00	37	
Former	14.69	2.98	9.00 - 21.00	36	
New	13.36	3.08	6.00 - 20.00	31	
<u>Volunteering Extensiveness (hours)</u>					14.35***
Entire Sample	3441.72	4202.98	117.23-26050.00	73	
Current	5130.02	5235.66	179.75-26050.00	37	
Former	1706.52	1426.17	117.23-5210.00	36	
New	-	-	-	0	
<u>Fluency</u>					5.63**
Entire Sample	114.95	45.71	46.00 - 283.00	104	
Current	130.57	50.70	62.00 - 283.00	37	
Formers	116.19	40.69	52.00 - 217.00	36	
News	94.87	37.92	46.00 - 192.00	31	
<u>Social Desirability</u>					.51
Entire Sample	15.05	2.47	9.00 - 21.00	87	
Current	14.96	2.41	10.00 - 19.00	28	
Former	15.39	2.74	9.00 - 21.00	31	
New	14.75	2.24	10.00 - 18.00	28	

* p < .05

** p < .01

*** p < .001

Before an appointment was scheduled for the new and former volunteers to come into the laboratory, they received a brief description of the volunteer project over the phone and 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. Volunteers currently volunteering within the community were invited to meetings held at Concordia University where various issues pertaining to volunteering generally and specific ideas for the project were discussed. Those current volunteers who indicated an interest in volunteering for an additional three hours per week for nine months within the SVIP at Concordia, were contacted and an appointment was scheduled.

Information on each participant was gathered in two individual sessions in the laboratory. First, participants completed a self-administered battery containing a series of standardized psychological measures to assess personality and psychological functioning during a session that lasted approximately 1 to 1 1/2 hours. Among the questionnaires were a consent form (current volunteer version, Appendix A, new and former volunteer version, Appendix B) and measures of personality (Appendix C), ego development (Appendix D), and socially desirable response style (Appendix E). In the second session, personal data with respect to age, marital status, educational history

and volunteer activity history were collected in a structured interview. The second session took place either immediately after or within a week of completing the series of questionnaires, depending on the participant's preference. During this second session, the current volunteers made a commitment to volunteer with SVIP, after a 3-month waiting period, for three hours per week for nine months in addition to their current volunteer work in the community. The former volunteers and new volunteers agreed to start volunteering, after a waiting period of three months, within the community, in a position they would find through SVIP, for a minimum of three hours each week for a minimum of six months.

Volunteer History. It was necessary to derive a measure of the extensiveness of volunteer experience for the current and former volunteers in this study. Current volunteers by definition are involved in volunteer work at the time of testing. They may or may not have been involved in a volunteer position prior to their present volunteer job. On the other hand, the former volunteers were not involved in any volunteer work around the time of testing, and had not been volunteering for at least six months prior to testing. Volunteering extensiveness based on the number of hours each individual has been involved with volunteer work, including past and present positions was selected as the most useful variable. It should be

noted that, by definition, the new volunteers would score zero on this variable.

Analysis of variance of current and former volunteers' total hours ever volunteered (Table 4) revealed a significant effect for volunteer status with current volunteers having volunteered more hours in their lives than former volunteers ($F(2, 101) = 14.35, p < .001$). This result confirms that current and former volunteers differ significantly in their volunteer histories with current volunteers having more extensive histories of volunteering.

Measures

Ego Development. The Washington University Sentence Completion Test of ego development (WUSCTED) was developed and revised by Loevinger and her colleagues (Loevinger & Wessler, 1970; Loevinger, 1985). Loevinger posits that individuals proceed through the nine stages of ego development in an invariant hierarchical sequence.

Reliability and Validity of the Washington University Sentence Completion Test. The reliability and validity of the sentence completion test as a measure of ego development have been well documented (Cohn, 1991; Hauser, 1976; Loevinger, 1979). Internal consistency of the WUSCTED is high. Loevinger and Wessler (1970) reported Cronbach's alpha to be .91, and later Loevinger (1979) reported alpha coefficients of internal consistency to be

about .85. Loevinger 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. Loevinger (1979) reported evidence from Loevinger and Wessler (1970) showing cross-sectional increases in developmental level with age as evidence for the sequentiality of the stages. In longitudinal studies with adolescents, ego level also increased with age. Loevinger (1979) defended the external validity of the WUSCTED by showing the pattern of its correlations with other tests including Kohlberg's Moral Maturity Test. Sullivan, McCullough and Stager (1970) found a correlation coefficient of .66 between the sentence completion test and Kohlberg's measure of moral judgment. The coefficient became .40 with age partialled out. Cohn (1991) reviews evidence that low ego levels are associated with impulsiveness (Starrett, 1983) and with delinquent behaviour (Frank & Quinlan, 1976)

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. Based on results obtained with Blasi's (1972) sample of children, Hauser

concludes that no more than between 16 and 25% of the variance in ego level is accounted for by intelligence. Hauser also points to a sample of adolescents studied by Hoppe (1972) where the correlation of IQ and ego development was .14. In McCrae and Costa's (1980) sample of adult men, ego development and verbal intelligence were correlated ($r = .28$).

Loevinger and Wessler (1970) reported the correlation coefficients between the number of words used in responses with the TPR of ego development as between .14 and .40 for one sample of single women and between .23 and .51 for another sample of married and single women. For McCrae and Costa's (1980) sample of adult men, ego development correlated with fluency at $r = .64$.

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. Loevinger admits that fluency is a distortion factor, but argues that it should be thought of as systematic error. 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 also 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).

Loevinger and Wessler (1970) reported alpha coefficients of internal consistency of .91, and later Loevinger (1979) reported alpha coefficients to be about .85. Hansell, Sparacino, Ronchi, and Strodbeck (1985) reported alpha coefficients of internal consistency as .70 and .80 for 12-item short forms, and Holt (1980) reported alphas of .77 and .76 for 12-item short forms.

The short version (Appendix D) used in this study is the first half of Form 81 and consists of 18 sentence stems that the individual is asked to complete (Loevinger, 1985). Participants were given a page with 18 sentence stems and asked to complete each sentence. A page of sentence completions is a protocol; one protocol was obtained from each individual. Protocols are scored for stage of ego development according to Loevinger and Wessler's (1970) scoring manual and Loevinger and Hy Le's (1989) supplementary scoring manual.

Scoring of the Washington University Sentence Completion Test.

Two ego development scores were derived for each participant based on the scoring procedure outlined by

Loevinger and Wessler (1970) and Loevinger and Hy Le (1989), an Item-Sum score and a Total Protocol Rating. An **Item sum** score for each individual is computed by adding together the scores for the 18 sentence completions for each individual. The **Total Protocol Rating** of ego development represents the stage of ego development for a particular individual and is derived by applying an automatic scoring procedure to the distribution of 18 scores for each individual.

The procedure used for preparing the Sentence Completions for scoring is recommended by Loevinger and Wessler (1970) and Loevinger and Hy Le (1989). First, all 18 sentence completion responses were transcribed for each individual. Then, the sentence completions were grouped by sentence # (all #1's together, etc.) and scored out of context with the rest of the item protocol. In order to score the WUSCTED for the present study, the author and a research assistant were trained according to Loevinger and Wessler's (1970) scoring manual and Loevinger and Hy Le's (1989) supplementary scoring manual.

Items were scored independently; that is, for all protocols, the first item was scored for all participants, then the second, and so on. Thus, the raters did not know the identifying characteristics (participant number, gender, volunteer status) of the individuals whose responses they scored. The author scored the 18 sentence

completions for each protocol (N=104), and the research assistant double-scored a subsample (55 protocols) of the 104 protocols. Each item from these 55 protocols was scored by the two raters working independently. When the two independent scores for a given item were in complete agreement, the rating was considered final. When there was disagreement, discrepancies were resolved by the pair of raters after discussion.

Each sentence completion response is assigned to one of nine developmental levels. These stages were converted into continuous data by assigning ascending numerical values (1-9) corresponding to the six full and three transitional stages of ego development. Responses at the impulsive (I-2) stage were scored as 1; self-protective (Δ) responses were scored as 2; ritual-traditional ($\Delta/3$) responses as 3; conformist (I-3) responses as 4; self-Aware (I-3/4) responses as 5; conscientious (I-4) responses as 6; individualistic (I-4/5) responses as 7; autonomous (I-5) responses as 8; and integrated (I-6) responses were coded as 9.

The two measures of ego development were derived in the following way: Item sum scores were computed for each individual by adding the 18 sentence scores. The Total Protocol Rating was derived by applying automatic scoring rules to each individual's distribution of 18 scores. These scoring rules are called "ogive" rules because they

are based on developing a cumulative frequency distribution for each individual's 18 scores. Based on these scoring rules, each individual is assigned to one of the nine stages of ego development.

Because of the high correlation ($r = .14$ to $.51$) between ego development and the number of words used in responses reported by Loevinger (1970), a fluency score, computed for each individual, was also determined by a word count of each protocol.

Personality. The NEO Five Factor Inventory (NEO-FFI) (Costa & McCrae, 1989), (Appendix C) 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.

Neuroticism contrasts adjustment with emotional instability. Extraversion assesses desire for quantity and intensity of interpersonal interaction, activity level, 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.

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." Items are summed to yield a score for each of the five domains of personality. 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. Test development, validation, and reliability are reported in the NEO-PI/FFI Manual Supplement (Costa & McCrae, 1989).

Social Desirability. The Marlowe-Crowne Social Desirability Scale (MCSD; Crowne & Marlowe, 1960) (Appendix E) measures the tendency to respond in socially desirable ways. The scale contains 33 items which include desirable but uncommon behaviours (e.g., admitting mistakes) and undesirable but common behaviours (e.g., gossiping). Respondents are asked to respond "True" or "False" to 18 items keyed in the true direction and 15 in the false direction. Scores range from 0 (no social desirability) to 33 (highest social desirability) with higher scores indicating higher social desirability. Crowne and Marlowe (1964) reported a mean of 15.5 (SD=4.4) for a sample of 300 college students. For a sample of 650 Peace Corps

volunteers, Fisher (1967) found means of 16.1 (SD=6.8) for males and 16.4 (SD=6.5) for females. Internal consistency alphas ranged from .73 to .88. Test-retest reliability was reported as .88 over 1 month (Crowne and Marlowe, 1964).

Results

Preliminary Analyses

Preliminary statistical procedures were carried out before examining the relationships among the variables of interest in this study.

Missing Data. Missing data for one case of age and for two cases of years of education was replaced by the mean value for the sample as a whole. Two cases of marital status and two cases of level of education were replaced with the modal category for the sample as a whole. For the NEO personality variables, the variable with missing data is a composite of other variables, and it occurred when participants were missing data on only one or some of the individual variables. To avoid the situation where participants are given a missing value for the composite variable even if missing only one of its items, missing items were replaced by the modal value for the three groups as a whole, and the item could then be included in the computation of the composite variable for the participant. These methods of substitution are conservative as they weight the substituted data based on the group mean or mode and therefore away from group differences. Data missing

for four former volunteers on hours of volunteering was replaced by the mean value for the group of former volunteers. Replacing this missing data with mean values based on the former and current volunteer hours would have confounded the data as former volunteers' scores on this variable represents volunteering done in the past only, while values for current volunteers include both past and volunteer work up to the present.

For the social desirability variable, data was missing for 16% of the participants. This proportion of missing data was too large for substitution to be meaningful, especially since the interest in social desirability was as a control variable. Therefore, partial correlations controlling for social desirability and ANCOVAs with means adjusted for social desirability, are based on a reduced sample size of 87.

Univariate and multivariate outliers. Analyses were performed to identify univariate outliers three standard deviations above or below the mean. Whether an observation is a univariate outlier depends on the set of observations to which it belongs. Therefore the presence of outliers was checked for the groups of new, former, and current volunteers separately. One extreme observation was found for the fluency variable, with one individual scoring 3.56 standard deviations above the mean for current volunteers. The fluency score for this individual was modified to

reduce the impact of this outlier. The fact that it was the most extreme case in the distribution was preserved by assigning a fluency score that represents a Z score of 3.00. This modified score was used in all subsequent analyses involving the fluency variable.

No multivariate outliers were found, all cases being within Cook's distance. In addition, an analysis of the Casewise plot of standardized residuals revealed no multivariate outliers.

Univariate Normality. The distributions for the study variables were inspected for normality. All variables except one was normally distributed.

The volunteering extensiveness variable was extremely skewed with the 31 new volunteers all having the same score of 0 hours of volunteer experience. Very extreme skewedness has a great impact on results but cannot be substantially helped by transformations. Rather than attempting to induce normality, two variables were created. The first, volunteer extensiveness refers to the number of hours of volunteer experience, but was computed for current and former volunteers only. In order to represent the new volunteers in a volunteer experience variable, two new categories were formed that reflect the presence or absence of a volunteer history. This variable was formed by combining the former and current volunteers into one group for participants with volunteer experience. The new

volunteers were left as the group without any volunteer experience. This dichotomous variable, called volunteer history status, was used in subsequent multivariate analysis. However, to ensure that information from the original volunteer extensiveness variable that reflected the number of hours of experience would not be lost, this variable was also retained and used in correlations and multivariate procedures for the current and former volunteers only.

Measure of Ego Development. As was outlined earlier, ego development can be expressed with an Item Sum or with a Total Protocol Rating of the stage of ego development. Holt (1980) points out that Loevinger has advocated a view of ego development stages as constituting "milestones," not "increments on a polar variable" and therefore the ratings are considered as nominal. Loevinger conceives of ego level as the highest level which an individual can attain, and consequently her ogive rules put emphasis on the few most extreme scores in an individual's distribution, therefore making Total Protocol Ratings less reliable for high ego level protocols. The ogive rules for deriving TPRs have been criticized for making gradual transitions appear as stage transitions.

The Item sum, on the other hand, is more stable and responds more slowly to extreme scores in an individual's distribution. The use of this score is consistent with the

view that development is linear and incremental, rather than phasic. Item sums are preferable for correlations and for univariate and multivariate procedures that make use of correlations and that assume an interval scale of measurement for continuous data. White (1985) advocates the use of the Item Sum score for correlations and the TPR for comparisons of stages. The correlation between the Item sum and TPR methods was .90 ($p < .001$) in the present study indicating little difference between the two methods. For the main analyses in this study, the Item Sum scores were used. The TPR scores were used for categorical purposes.

Descriptive Statistics for study variables. The descriptive statistics for the study variables are presented for the entire sample of 104 individuals and for current, former and new volunteers in Table 4. The age range for the combined groups covers 27 years (from 55 to 82) with a mean age for participants of 67 years. The range in years of education is also wide, (6-22 years). The range in volunteering extensiveness for former and current volunteers is wide, ranging from 117 to 26,050 hours of volunteering.

Table 5 presents the frequency of ego levels for this sample as a whole, and for current, former, and new volunteers separately. Levels spanned nearly the entire range of ego development and the normal distribution of scores indicates that both high and low ego development is

Table 5

Distribution of TPR Ego Levels for Entire Sample (N=104)

Ego level and stage		N	%	Cumulative %
I-2	Impulsive	1	1.0	1.0
Δ	Self-Protective	2	1.9	2.9
Δ/3	Ritual-Traditional	4	3.8	6.7
I-3	Conformist	22	21.2	27.9
I-3/4	Self-Aware	24	23.1	51.0
I-4	Conscientious	34	32.7	83.7
I-4/5	Individualistic	16	15.4	99.0
I-5	Autonomous	1	1.0	100.0
I-6	Integrated	0	0	100.0
Total		104	100	100

Distribution of TPR Ego Levels for Current Volunteers (N=37)

Ego level and stage		N	%	Cumulative %
I-2	Impulsive	0	0.0	0.0
Δ	Self-Protective	0	0.0	0.0
Δ/3	Ritual-Traditional	1	2.7	2.7
I-3	Conformist	3	8.1	10.8
I-3/4	Self-Aware	7	18.9	29.7
I-4	Conscientious	19	51.4	81.1
I-4/5	Individualistic	6	16.2	97.3
I-5	Autonomous	1	2.7	100.0
I-6	Integrated	0	0	100.0
Total		37	100.0	100.0

Table 5 (continued)

Distribution of TPR Ego Levels for New Volunteers (N=31)

Ego level and stage		N	%	Cumulative %
I-2	Impulsive	1	3.2	3.2
Δ	Self-Protective	1	3.2	6.5
Δ/3	Ritual-Traditional	2	6.5	12.9
I-3	Conformist	10	32.3	45.2
I-3/4	Self-Aware	9	29.0	74.2
I-4	Conscientious	7	22.6	96.8
I-4/5	Individualistic	1	3.2	100.0
I-5	Autonomous	0	0.0	100.0
I-6	Integrated	0	0.0	100.0
Total		31	100.0	100.0

Distribution of TPR Ego Levels for Former Volunteers (N=36)

Ego level and stage		N	%	Cumulative %
I-2	Impulsive	0	0.0	0.0
Δ	Self-Protective	1	2.8	2.8
Δ/3	Ritual-Traditional	1	2.8	5.6
I-3	Conformist	9	25.0	30.6
I-3/4	Self-Aware	8	22.2	52.8
I-4	Conscientious	8	22.2	75.0
I-4/5	Individualistic	9	25.0	100.0
I-5	Autonomous	0	0.0	100.0
I-6	Integrated	0	0.0	100.0
Total		36	100.0	100.0

adequately represented in this sample.

Inter-rater Reliability. The percentages of exact agreement on item scores between the two raters for each of the 18 sentences are given in Table 6. Inter-rater agreement on individual's responses varied by sentence number and the range of total agreements is from 69.1% of individuals (for sentence #6) to 94.5% (sentence #7), with a median of 82.70% of perfect agreements. These percentages of complete agreement compare well with Loevinger's (1970) data where the range of total agreements was from 60% to 86% of participants across the 36 items, with a median of 77%. Inter-rater agreement on individual items was even better when agreement within one point was examined. Percent agreement ranged from 87.3% to 100% with the two raters agreeing within one point on a median of 95.45% of responses.

Pearson correlations were also computed for the two raters for the 55 individuals who were scored by both raters, and are presented in Table 6. The correlation coefficient reliabilities for the 18 sentences range from .70 to .98. The median correlation was .89. These compare well with Loevinger's (1970) data which ranged from .49 to .88 with a median of .75, and indicate generally good inter-rater agreement on individual items. Inter-rater reliability was also computed between the two raters' Item Sums for the 55 protocols. The correlation was .96 ($p <$

Table 6

Agreement between pairs of scorers by item of WUSCTED
(N=55).

Item	Percentage of agreement		Pearson Correlation
	% Perfect	% Within 1 point	
1.	76.4	96.4	.85***
2.	72.7	87.3	.76***
3.	81.8	94.5	.88***
4.	94.5	100.0	.98***
5.	90.9	92.7	.83***
6.	69.1	87.3	.70***
7.	94.5	98.2	.91***
8.	83.6	92.7	.75***
9.	78.2	94.5	.91***
10.	81.8	96.4	.88***
11.	81.8	89.1	.79***
12.	87.3	98.2	.95***
13.	81.8	96.4	.91***
14.	90.9	98.2	.93***
15.	87.3	100.0	.95***
16.	85.5	96.4	.90***
17.	90.9	94.5	.90***
18.	70.9	92.7	.83***

*** p < .001

.001), also indicating good inter-rater agreement. These data provide support for the inter-rater reliability of the 18-item short form of the WUSCTED that was used to assess ego development in this study.

Internal Consistency. Cronbach's coefficient alpha is a measure of internal consistency. Loevinger and Wessler (1970) reported an alpha of .91 as the internal consistency of their 36-item WUSCTED for her sample of 543 women. Later, Loevinger (1979) reported alpha coefficients of internal consistency of about .85. The alpha coefficient of internal consistency of the 18-item WUSCTED used in this study was .84.

Correlations among study variables. The matrices of the correlated variables within each group were examined to determine whether the patterns of significant correlations were consistent across all three groups. Inspection revealed that, generally, when two variables in one group correlated significantly, the same two variables in the other two groups also correlated significantly or were at least associated in the same direction. Since the patterns of correlations were consistent across the three groups of volunteers, the statistical procedures in this study were applied to the sample as a whole. Table 7 presents the correlations between the variables examined in this study.

Correlates of ego development. Prior to examining

Table 7

Correlation Matrix of Study Variables

<u>Variables</u>	Marit Stat ^a	educ tion	Vol- Vol Hrs	hist stat ^a	Item sum	Flu ency
Age	-.04	-.13	.31**	.22*	.07	.09
Gender ^a	-.42***	-.15	.15	.03	.03	.11
Marital Status ^a		.18	-.12	.05	.16	.14
Educ ation			-.15	.26**	.42***	.21*
Volun- teering hours					.27	.08
Volunteer history status ^a					.38***	.29**
Item S _i						.80***
Flu- ency						
Neuroticism						
Extraversion						
Openness						
Agreeableness						
Conscientiousness						

^a coded so that higher values indicate female gender, married status and the presence of a volunteer history.

* p < .05

** p < .01

*** p < .001

Table 7 (continued)

Correlation Matrix of Study Variables

<u>Variables</u>	Neuroticism	Extraversion	Openness	Agreeableness	Conscientiousness	Social desirability
Age	-.17	.09	-.08	.06	-.06	-.06
Gender ^a	.05	.04	.28**	.14	.14	-.11
Marital Status ^a	-.06	.07	-.11	-.16	-.00	-.07
Education	-.05	-.14	.22*	-.11	.03	-.14
Volunteering hours	-.08	.25*	-.07	-.01	.06	-.06
Volunteer history status ^a	.06	.20*	.09	.14	-.02	.08
Item Sum	-.04	.03	.35***	.17	-.13	-.19
Fluency	.03	-.05	.27**	.10	-.08	-.11
Neuroticism		-.26**	-.12	-.38***	-.29**	-.00
Extraversion			.15	.22*	.30**	.12
Openness				.18	.06	-.07
Agreeableness					.13	-.13
Conscientiousness						-.05

^a coded so that higher values indicate female gender and married status and the presence of a volunteer history

* p < .05

** p < .01

*** p < .001

the relationships between ego development and the other variables of interest in this study, it was important to identify possible sources of overlap with ego development. Specifically, social desirability, fluency, and years of education were examined in relation to ego development.

The item sum score of ego development was uncorrelated with the Marlowe-Crowne scale of social desirability ($r = -.19$), correlated significantly with years of education ($r = .42$, $p < .001$), and correlated significantly with fluency ($r = .80$, $p < .001$). Because of the high correlation between ego development and fluency, and between ego development and education, these variables were controlled with partial correlations and means were adjusted for the contribution of these variables with analyses of covariance to evaluate the main hypotheses of this study. In addition, although social desirability was uncorrelated with ego development, partial correlations that control and analyses of covariance that adjust for social desirability were also employed to control any contribution of a socially desirable response style to correlations or group differences. The partial correlations controlling for social desirability, fluency, years of education, and all three simultaneously are presented in tables 8, 9, 10, and 11 respectively.

Group differences on correlates of ego development.

Analysis of variance on participants' fluency scores

Table 8

Correlations of Item Sum measure of Ego Development with Trait measures of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, controlling for Social Desirability (N=87).

Item Sum	
Traits	
Neuroticism	-.10
Extraversion	.04
Openness to Experience	.36***
Agreeableness	.14
Conscientiousness	-.11

* p < .05

** p < .01

*** p < .001

Table 9

Correlations of Item Sum measure of Ego Development with Trait measures of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, controlling for Fluency (N=104).

Item Sum	
Traits	
Neuroticism	-.11
Extraversion	.11
Openness to Experience	.22**
Agreeableness	.16
Conscientiousness	-.11

* p < .05

** p < .01

*** p < .001

Table 10

Correlations of Item Sum measure of Ego Development with Trait measures of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, controlling for Years of Education (N=104).

Item Sum	
Traits	
Neuroticism	-.02
Extraversion	.10
Openness to Experience	.29**
Agreeableness	.24**
Conscientiousness	-.16

* p < .05

** p < .01

*** p < .001

Table 11

Correlations of Item Sum measure of Ego Development with Trait measures of Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness, controlling for Social Desirability, Fluency, and Years of Education (N=87).

Item Sum	
Traits	
Neuroticism	-.16
Extraversion	.18'
Openness to Experience	.13
Agreeableness	.24'
Conscientiousness	-.12

' p < .05

'' p < .01

''' p < .001

revealed a significant effect for volunteer status ($F = 5.63, p < .01$). Follow-up tests using the Tukey procedure revealed that current volunteers used more words to express their ego development than new volunteers. Analysis of variance on participants' social desirability ratings revealed that the three groups of volunteers did not differ on their social desirability ($F = .51, p = .60$). Descriptive statistics for these variables are presented in Table 4.

Main Analyses

The main hypotheses for this study were tested by means of correlational analyses, univariate and multivariate analyses of variance, and hierarchical multiple regression analyses. It should be noted that three measures of volunteer experience were used to examine the main hypotheses of this study. Volunteer extensiveness is a measure of the number of hours of volunteer experience for current and former volunteers. Volunteer history status is a dichotomous variable indicating the presence (current and former volunteers) or absence (new volunteers) of a history of volunteering. These two variables were used to examine the hypotheses of this study with correlational analyses. The third volunteer experience variable is volunteer status, a grouping factor with three levels representing current, former, and new volunteers. This variable was used in analyses of variance to examine

differences between the three groups of volunteers.

Hypothesis #1. It was predicted that volunteer experience would be related to openness to experience and to extraversion. It was also hypothesized that current volunteers would score higher on the trait dimensions of openness to experience and extraversion than new volunteers

To test the hypothesis that a more extensive history of volunteering would be associated with the trait dimensions of openness to experience and extraversion, correlations were computed for the continuous volunteering extensiveness variable for current and former volunteers and for the dichotomous volunteer history variable for all participants, and are presented in table 7.

Correlation coefficients between the trait dimension openness to experience and volunteer extensiveness (hours) was nonsignificant ($r = -.07$). Similarly the relationship between openness and volunteer history status was nonsignificant ($r = .09$). The association between extraversion and volunteer extensiveness (hours) was significant ($r = .25$, $p < .05$) as was the association between extraversion and volunteer history status ($r = .20$, $p < .05$).

To assess the relations between the predictor variable of volunteer status, and the five trait measures of personality, a MANOVA was performed on the 5 Personality

trait variables for participants in the three groups. Summary statistics on these variables for the three groups (current, former, and new volunteers) are given in Table 12.

The MANOVA showed a significant effect of Volunteer Status. The Wilks Lambda multivariate test of significance indicated that overall, the personality variables of neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness were different for the three groups. ($F(10, 194) = 3.20, p < .001$).

To examine the relationship between volunteer status and the trait dimensions of openness to experience and extraversion, two univariate analyses of variance were performed for the three groups of participants. Means and standard deviations are presented in Table 12. The univariate analysis of variance on the openness to experience scores showed that the three groups of volunteers did not significantly differ on openness to experience, ($F(2, 101) = 1.18, p = .310$). The univariate analysis of variance on the extraversion scores showed that the three groups differed on extraversion ($F(2, 101) = 4.36, p < .05$). Post hoc tests using the Tukey procedure indicated that current volunteers scored higher than new volunteers on extraversion.

Hypothesis #2. It was predicted that volunteer experience would be related to ego development. It was

Table 12

Descriptive Statistics and Univariate Analyses of Variance for Study Variables for entire sample (N=104), Current (N=37), Former (N=36), and New (N=31) Volunteers.

Measure	Mean	Standard deviation	Range	N	F
<u>Neuroticism</u>					6.69**
Entire Sample	16.23	5.42	3.00 - 33.00	104	
Currents	14.30	4.33	3.00 - 23.00	37	
Formers	18.64	5.76	7.00 - 33.00	36	
News	15.74	5.29	9.00 - 30.00	31	
<u>Extraversion</u>					4.36*
Entire Sample	27.85	5.42	14.00 - 41.00	104	
Currents	29.81	5.13	19.00 - 41.00	37	
Formers	27.25	5.03	16.00 - 37.00	36	
News	26.19	5.63	14.00 - 36.00	31	
<u>Openness</u>					1.18
Entire Sample	28.85	5.49	14.00 - 44.00	104	
Currents	29.95	5.16	16.00 - 40.00	37	
Formers	28.39	5.80	14.00 - 39.00	36	
News	28.07	5.48	19.00 - 44.00	31	
<u>Agreeableness</u>					1.21
Entire Sample	34.34	4.94	19.00 - 46.00	104	
Currents	34.41	4.56	21.00 - 43.00	37	
Formers	35.17	4.87	24.00 - 46.00	36	
News	33.29	5.41	19.00 - 45.00	31	
<u>Conscientiousness</u>					.07
Entire Sample	35.10	6.08	16.00 - 48.00	104	
Currents	35.24	6.95	17.00 - 47.00	37	
Formers	34.78	4.85	21.00 - 44.00	36	
News	35.29	6.43	16.00 - 48.00	31	
<u>Ego Development</u>					12.13***
Item Sum					
Entire Sample	88.67	10.35	58.00 - 119.00	104	
Currents	93.87	9.01	80.00 - 119.00	37	
Formers	88.56	9.89	65.00 - 106.00	36	
News	82.61	9.22	58.00 - 100.00	31	

* p < .05

** p < .01

*** p < .001

also hypothesized that current volunteers would have higher ego development than new volunteers.

To test the hypothesis that volunteer experience would be associated with higher ego development levels, a correlation was computed between the item sum score of ego development and volunteering extensiveness. The correlation was nonsignificant ($r=.17$) and shows that extensiveness of volunteering as measured by the number of hours of volunteer activity for current and former volunteers is not associated with ego development level.

A correlation was computed for all participants between the volunteer history status variable reflecting the presence or absence of a history of volunteer experience and the item sum measure of ego development. The correlation coefficient ($r = .38, p < .001$) indicates a significant association between ego development and volunteer history status. Higher ego development levels are associated with the presence of a volunteer history (or being a current or former volunteer).

An analysis of variance on participants' item sum scores of ego development revealed that current, former, and new volunteers did differ on their level of ego development ($F(2, 101) = 12.13, p < .001$), as predicted in the second hypothesis. Means and standard deviations are presented in Table 12. Follow-up tests using the Tukey procedure revealed that current volunteers had

significantly higher ego development than former and than new volunteers. In addition, former volunteers had significantly higher scores than new volunteers on ego development.

Ego development is known to be related to years of education and to fluency, and in this study was associated with both of these variables. In addition, it is possible that a socially desirable style of responding could be responsible for a relationship between ego development and volunteer status. A series of analyses of covariance was performed to determine the effect of volunteer status on ego development with three potentially extraneous sources of variance controlled: (a) social desirability, (b) years of education, and (c) fluency scores.

An analysis of covariance was performed to adjust for the possible contribution of social desirability to participant's sentence completion responses. Table 13 shows that the covariate social desirability had a significant effect on the ego development variable ($F(1, 83) = 3.95, p < .05$). When the Crowne Marlowe measure of social desirability was treated as a covariate, the effect of volunteer status on ego development was strengthened ($F(2, 83) = 12.59, p < .001$). Tukey post hoc tests on adjusted means indicate that the difference in ego development between current and new volunteers and between current and former volunteers remains when means are

Table 13

Analysis of Co-variance for mean differences on Ego Development scores for three groups of Volunteers, adjusting for Social Desirability (N=87).

Source	Sum of Squares	<u>df</u>	Mean Square	F
<u>Covariate:</u>				
Social desirability	350.48	1	350.48	3.95*
<u>Main Effect:</u>				
Volunteer Status	2236.45	2	1118.23	12.59***
<u>Residual:</u>	7371.30	83	88.81	

* p < .05

** p < .01

*** p < .001

adjusted for the contribution of social desirability. However, the difference between former and new volunteers disappears with social desirability as a covariate.

An analysis of covariance was performed on ego development, adjusting for the effect of years of education. Table 14 shows that the covariate education had a significant effect on the ego development variable ($F(1, 100) = 25.37, p < .001$). When years of education was treated as a covariate, the difference between volunteer groups on ego development persisted ($F(2, 100) = 7.58, p < .001$), although with a smaller F value. Tukey post hoc tests on means adjusted for the effect of education indicate that the current volunteers remained higher than the new volunteers on ego development.

An analysis of covariance was performed on ego development scores with fluency as a covariate. Table 15 shows that fluency had a significant effect on the ego development variable ($F(1, 100) = 204.87, p < .001$). The relationship between volunteer status and ego development remains significant with fluency as a covariate ($F(2, 100) = 6.19, p < .01$). Post hoc tests using the Tukey procedure on adjusted means revealed that the current volunteers remained higher than the new volunteers on ego development.

A final analysis of covariance was performed, adjusting for the three covariates, social desirability, years of education, and fluency, simultaneously. Table 16

Table 14

Analysis of Co-variance for mean differences on Ego Development scores for three groups of Volunteers, adjusting for Years of Education (N=104).

Source	Sum of Squares	df	Mean Square	F
<u>Covariate:</u>				
Education	1990.38	1	1990.38	25.37***
<u>Main Effect:</u>				
Volunteer Status	1189.41	2	594.71	7.58***
<u>Residual:</u>	7847.10	100	78.47	

* $p < .05$

** $p < .01$

*** $p < .001$

Table 15

Analysis of Co-variance for mean differences on Ego Development scores for three groups of Volunteers, adjusting for Fluency (N=104).

Source	Sum of Squares	df	Mean Square	F
<u>Covariate:</u>				
Fluency	7120.90	1	7120.90	204.87***
<u>Main Effect:</u>				
Volunteer Status	430.10	2	215.05	6.19**
<u>Residual:</u>	3475.88	100	34.76	

* $p < .05$

** $p < .01$

*** $p < .001$

Table 16

Analysis of Co-variance for mean differences on Ego Development scores for three groups of Volunteers, adjusting for Social Desirability, Education, and Fluency (N=104).

Source	Sum of Squares	df	Mean Square	F
<u>Covariates:</u>	7341.94	3	2447.31	81.86***
Social desirability	42.05	1	42.05	1.41
Education	676.21	1	676.21	22.62***
Fluency	5206.95	1	5206.95	174.17***
<u>Main Effect:</u>				
Volunteer Status	194.67	2	97.33	3.26*
<u>Residual:</u>	2421.62	81	29.90	

* $p < .05$

** $p < .01$

*** $p < .001$

shows that all three covariates together had a significant effect on ego development ($F(3, 81) = 81.86, p < .001$). The effect of volunteer status on ego development remained significant ($F(2, 81) = 3.26, p < .05$) with means adjusted for all three covariates. Follow up analyses on adjusted means using the Tukey procedure indicated that the significant difference on ego development between current and new volunteers persisted with social desirability, education and fluency as covariates.

Hypothesis #3. It was hypothesized that there would be a relationship between ego development and openness to experience. The coefficient of correlation between the item sum score of ego development and openness to experience was $r = .35$ ($p < .001$) and supports the third hypothesis. Partial correlations between ego development and openness controlling separately for fluency and education remained significant ($r = .22, p < .01$ and $r = .29, p < .01$ respectively). The correlation between ego development and openness uncorrected for fluency ($r = .35$) decreases somewhat with education controlled ($r = .29$) and again when fluency is controlled ($r = .22$). It appears that openness accounts for about 12% of the variance in ego level scores, while it accounts for 8% with education controlled and only about 5% of the variance with fluency controlled. However, with social desirability controlled ($r = .36, p < .001$) the correlation coefficient is

virtually identical to the coefficient without social desirability controlled. When fluency, years education, and social desirability are controlled simultaneously, the correlation between openness and ego development decreases and is non-significant ($r = .13$, ns).

Hypothesis #4. Based on the assumptions underlying the first three hypotheses, it is predicted that openness to experience and volunteer experience contribute to the prediction of ego development.

This hypothesis was tested by means of hierarchical regression analyses that examine the predictors of ego development. This procedure tests the additive effects of blocks of independent variables on ego development and each set of variables is evaluated for its unique contribution to the prediction of ego development. In this study, five sets of predictors were analyzed: (1) demographic variables of age, gender, education and marital status; (2) the trait dimension of openness to experience; (3) volunteer experience; (4) the interaction of openness and volunteer experience, and (5) fluency.

Fluency was included in the regression procedures because of its considerable overlap with ego development. However, as fluency seems to be a necessary but not sufficient for the expression of higher ego development, and because of its high correlation with ego development, it is likely that it would account for a large part of the

variance of ego development and if entered early on in the regression, prevent other variables from contributing. Therefore, two sets of regressions were performed with the order of entry of fluency varied. First, fluency was entered in the second stage, after the demographic variables and before openness and volunteer experience to examine the contribution of openness and volunteer experience to ego development beyond the contribution of fluency. Next, fluency was entered in the final stage, after all the other variables had been entered.

Volunteering experience has been operationalized by the continuous measure of number of hours and by the dichotomous measure of volunteer history status. As the contributions of both of these measures of volunteer experience warrant attention, the hierarchical regressions were performed, with either volunteer history or volunteer extensiveness as the measure of volunteer experience.

Overall, four hierarchical regressions were performed, varying the order of entry of fluency and varying the measure of volunteer experience.

The first hierarchical regression is summarized in Table 17. The demographic variables (age, gender, education, marital status) together explained 21% of the variance in ego development, a significant contribution. Fluency, added at the second step, added 53%. Openness at step 3 added 2%, a small but significant contribution.

Table 17

Summary of Hierarchical Regression Analysis for Variables predicting Ego Development for Current and Former Volunteers (N=73)

Variable	R ²	R ² change	F for change
<u>Step 1</u>	.21	.21	4.29**
Age			
Gender			
Education			
Marital Status			
<u>Step 2</u>			
Fluency	.74	.53	127.58***
<u>Step 3</u>			
Openness	.75	.02	4.48*
<u>Step 4</u>			
Volunteer Extensiveness (Hours)	.76	.01	2.95
<u>Step 5</u>			
Hours * Openness	.78	.01	3.80

Overall R² = .78, F = 26.77***

* p < .05

** p < .01

*** p < .001

However, the contribution of hours of volunteering was small and insignificant. When the variable volunteer history (table 18) was used instead of volunteer extensiveness, a similar pattern of results emerged except that openness at step 3 no longer contributed significantly.

The hierarchical regressions with fluency entered into the equation last, are summarized in tables 19 and 20. For the sample of current and former volunteers, openness at step 2 contributes 9% ($p < .01$) of the variance in ego development, and volunteer extensiveness contributes a 6% ($p < .05$). For the sample as a whole, openness and volunteer history status each contribute 6% of the variance (both $ps < .01$).

The overall regression equation including volunteer extensiveness as a predictor explains 78% of the variance in ego development for the current and former volunteers when fluency is in the equation. Significant predictors when all predictors have been entered are education and fluency with the interaction between openness and hours approaching significance. The regression equation explains 36% of the variance in ego development when fluency is not included. Significant predictors when all predictors have been entered are age, education, openness, and volunteering hours.

The equation that includes the dichotomous volunteer

Table 18

Summary of Hierarchical Regression Analysis for Variables predicting Ego Development for entire sample (N=104)

Variable	R ²	R ² change	F for change
<u>Step 1</u>	.23	.23	7.22***
Age			
Gender			
Education			
Marital Status			
<u>Step 2</u>			
Fluency	.72	.49	170.50***
<u>Step 3</u>			
Openness	.73	.01	3.49
<u>Step 4</u>			
Volunteer History Status (VHS)	.74	.01	3.72
<u>Step 5</u>			
VHS * Openness	.74	.00	.12

Overall R² = .74, F = 33.41***

* p < .05

** p < .01

*** p < .001

Table 19

Summary of Hierarchical Regression Analysis for Variables predicting Ego Development for Current and Former Volunteers (N=73)

Variable	R ²	R ² change	F for change
<u>Step 1</u>	.21	.21	4.29**
Age			
Gender			
Education			
Marital Status			
<u>Step 2</u>			
Openness	.30	.09	8.43**
<u>Step 3</u>			
Volunteer Extensiveness (Hours)	.36	.06	5.68*
<u>Step 4</u>			
Hours * Openness	.37	.01	.84
<u>Step 5</u>			
Fluency	.78	.41	113.09***

Overall R² = .78, F = 26.77***

* p < .05

** p < .01

*** p < .001

Table 20

Summary of Hierarchical Regression Analysis for Variables
predicting Ego Development for entire sample (N=104)

Variable	R ²	R ² change	F for change
<u>Step 1</u>	.23	.23	7.2?***
Age			
Gender			
Education			
Marital Status			
<u>Step 2</u>			
Openness	.29	.06	8.57**
<u>Step 3</u>			
Volunteer History Status (VHS)	.34	.06	8.36**
<u>Step 4</u>			
VHS * Openness	.35	.00	.45
<u>Step 5</u>			
Fluency	.74	.39	141.33***

Overall R² = .74, F = 33.41***

* p < .05

** p < .01

*** p < .001

history variable explains 74% of the variance in ego development for the entire sample with fluency included. When all predictors have been entered, education and fluency emerge as significant with openness and volunteer history approaching significance. The equation explains 35% of the variance in ego development when fluency is not included, and education, openness to experience and volunteer history status emerge as significant predictors.

Overall, when fluency is included in the equation, significant variables are education and fluency. With fluency excluded, significant variables are education, openness and volunteer experience regardless of the measure of volunteer experience that is used. In addition, age is significant for the equation including volunteer extensiveness.

Exploratory analyses. First, the relations among ego development and the trait dimensions of neuroticism, extraversion, conscientiousness, and agreeableness, were explored. Then, the relations between volunteering and the trait dimensions of neuroticism, agreeableness and conscientiousness were explored.

Correlation coefficients were computed to examine the relations among ego development and the personality dimensions of neuroticism, extraversion, agreeableness and conscientiousness (openness was examined in relation to the third hypothesis). An examination of the correlation

matrix in Table 7 reveals that ego development is not related to the trait dimensions of neuroticism extraversion, agreeableness or conscientiousness. However, with education controlled (Table 10), there is a significant correlation between agreeableness and ego development ($r = .24, p < .01$). This correlation between agreeableness and ego development is nonsignificant with social desirability and fluency controlled, but is significant when all three variables are controlled ($r = .24, p < .05$).

There is a significant correlation between extraversion and ego development ($r = .18, p < .05$) with social desirability, fluency and education simultaneously controlled (Table 11). The correlations when fluency, education and social desirability are controlled separately are non-significant and the coefficients are .11, .10 and .04, respectively.

Neuroticism was correlated negatively with extraversion ($r = -.26, p < .01$), agreeableness ($r = -.38, p < .001$), and conscientiousness ($r = -.29, p < .01$). Extraversion was correlated with agreeableness ($r = .22, p < .05$) and conscientiousness ($r = .30, p < .01$).

Correlation coefficients were computed to examine the relations between volunteer experience and the trait dimensions of neuroticism, agreeableness, and conscientiousness (openness and extraversion were examined

in relation to the first hypothesis). Table 7 shows that these traits were not associated with volunteer experience when defined as either extensiveness of volunteering or as volunteer status history.

To examine the effect of volunteer status on the trait dimensions of neuroticism, conscientiousness and agreeableness (openness and extraversion were examined in relation to the first hypothesis) a series of univariate analyses of variance were performed. Descriptive statistics are presented in Table 12. The results showed that the three groups differed on neuroticism ($F(2, 101) = 6.69, p < .01$), but not on agreeableness ($F(2, 101) = 1.21, p = .30$) or conscientiousness ($F(2, 101) = .07, p = .93$). Follow up tests using the Tukey procedure indicated that current volunteers had lower scores than former volunteers on neuroticism.

Discussion

Normative comparisons of Levels of Ego Development

The absence of norms for different age groups prevents a comprehensive comparison of the ego development stages of this elderly sample with official 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 (I-3) level, 40% at the self-aware (I-3/4) level, and 17% at the conscientious (I-4) level. With the sample in the present study, 21.2% were at the conformist

(I-3) level, 23.1% at the self-aware (I-3/4) level, and 32.7% at the conscientious (I-4) level. Looking at the groups separately, we find that for current volunteers, only 8.1% were at the conformist (I-3) level, 18.9% at the self-aware (I-3/4) level, and 51.4% at the conscientious (I-4) level. For the sample of former volunteers, the percentages of individuals at these three levels were uniform, with 25% at the conformist (I-3) level, and 22.2% each at the self-Aware (I-3/4) and conscientious (I-4) levels. For the new volunteers, there were 32.3% at the conformist (I-3) level, 29.0% at the self-aware (I-3/4) level, and 22.6% at the conscientious (I-4) level.

It is possible that the apparent representation by our elderly sample at higher levels than Holt's (1980) sample of 16-25 year olds attests to an effect of age. Hauser (1976) points out that Loevinger excluded age from her model of ego development, but has suggested that age may be a necessary but not sufficient condition for reaching higher stages. Moreover, Loevinger and Wessler (1970) report correlations between ego development and chronological age of .74 for boys and .69 for girls between the ages of 9 and 18 which support the idea that there are age trends in ego development. What is most striking, however, is that for the sample of current volunteers, there are more individuals at the higher stages of ego development than for the former and new volunteers.

Social Desirability

The mean of 15 for the present study on the social desirability scale is similar to the mean of 15.5 reported by Crowne and Marlowe (1964) for a sample of college students and the mean of 16.1 reported by Fisher (1967) for a sample of Peace Corps volunteers and reveals that the individuals in this study displayed average levels of social desirability.

The high correlation between Ego Development and Fluency

The results suggest that the sentence completion test is measuring a construct that is only partially equivalent to verbal fluency. The issue to be discussed is the nature of the relationship between verbal fluency and ego development. Perhaps verbal fluency is necessary, but not sufficient for the expression of higher levels of ego development. 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 necessary for the expression of or indicative of the individual's ego level; fluency would not be sufficient to indicate a higher ego level. However, when an individual expresses new ideas with additional words, it can be argued that these additional words are necessary for the expression of conceptual complexity and fluency is necessary for the expression of higher ego

levels. Perhaps fluency is a necessary, at the higher ego levels, but not sufficient at the lower ego levels, condition for the expression of higher ego levels.

In fact, the high correlation between fluency and ego level in this sample of elderly adults may indicate that when individuals did use more words to complete the sentences, these words revealed more conceptual complexity and resulted in higher ego development ratings. Conversely, when the individuals had fewer ideas to express, in this sample, it is possible that they used the necessary words to express their ideas, but did not repeat the same idea with different words, so that lower ego levels would be associated with lower word counts. In a different sample, if lower ego level individuals repeated their ideas with many different words, lower ego levels may be more associated with larger word counts and there might be a smaller correlation between ego development and fluency. The relationship between volunteer status and ego development remains significant with fluency controlled which suggests that the relationship between volunteer status and ego development is not entirely determined by the fluency of the protocols.

Hypotheses

Hypothesis #1. The first hypothesis is partially supported as significant results were obtained for the extraversion but not for the openness variable. Openness

to experience was not associated with either measure of volunteer experience, and univariate analyses of variance showed that the three groups of volunteers did not differ on this trait dimension. Extraversion did correlate significantly with both measures of volunteer experience and univariate analyses of variance showed that current volunteers were more extraverted than new volunteers.

The findings concerning extraversion are consistent with previous research that had found volunteers to be more extraverted than non volunteers. Furthermore, these findings are expected based on Costa and McCrae's dimension of extraversion. It seems that more extraverted individuals are more likely to actively fill their time with activities involving a social aspect such as volunteering. The new volunteers were less assertive in organizing volunteer activities for themselves as they waited until the study's recruitment. Furthermore, the large groups of people often found in volunteering settings would appeal to the extravert.

Previous research has not examined the dimension of openness to experience in relation to volunteering so the predictions of the present study were purely theoretical and were based on the assumption that more open individuals would have a richer variety of experiences, including volunteering. It was predicted that current volunteers would score higher on this dimension than individuals who

had not sought out the experience of volunteering before the study's recruitment. However, current and new volunteers did not differ on this construct. One of the aspects of openness is the willingness to try new experiences. In fact, for a new volunteer who had never before volunteered, starting volunteer activity could be said to represent a novel experience. So, perhaps openness promoted the seeking out of volunteer activity among both the current and new volunteers. Moreover, perhaps openness leads to new non-volunteering experiences. Further research is needed to examine the differences between non-volunteers and new volunteers on this dimension.

Hypothesis #2. The second hypothesis receives partial support. The continuous measure of volunteer experience, hours of volunteer experience, was unrelated to ego development. However, a significant correlation coefficient indicated that the presence of a volunteer history was associated with higher ego development. Analysis of variance showed that volunteer status did have an effect on ego development with current volunteers having higher levels of ego development than former and than new volunteers, and with former volunteers having higher ego development than new volunteers. This effect of volunteer status on ego development persisted adjusting for the covariates of education, fluency and social desirability. It seems that what is relevant to ego development is the

presence of a volunteer history or volunteer status rather than the actual amount of volunteering history.

When social desirability was used as a covariate, the significant negative correlation between ego development and social desirability and the strengthened effect of volunteer status on ego development indicate that social desirability is not an aspect of the construct of ego development. Social desirability does not act as a source of extraneous variance but rather is a construct that operates in opposition to ego development so that individuals high in ego development have lower scores on social desirability. The results when means are adjusted for years of education and fluency show that the relationship between volunteer status and ego development is not fully accounted for by years of education or by fluency.

Hypothesis #3. The third hypothesis receives support from the positive correlation between ego development and openness to experience. These results are consistent with previous work by McCrae and Costa (1980) as well as with theoretical connections between openness and ego development. However, the results suggest that both education and fluency are each separately responsible for part of the relationship between ego development and openness to experience.

Hypothesis #4. The fourth hypothesis is supported as

the results show that both openness and volunteer experience do explain a significant portion of the variance in ego development whether volunteer experience is measured by the number of hours of volunteer experience or by the presence or absence of a volunteer history. However, these variables explain the variance in ego development only if entered before fluency in the regression equation. It seems that fluency is too highly correlated with ego development and consequently, if entered early in the equation, "robs" the other variables of the opportunity to contribute to the prediction of ego development. Since fluency seems to be necessary for the expression of higher ego levels but not sufficient to justify a high ego development rating, the regression equation that enters fluency later on in the equation is justified as fluency is not a construct independent of ego development that contributes to its prediction.

Exploratory analyses. The significant association between ego development and agreeableness that surfaces only when education is controlled suggests that the part of ego development that is related to agreeableness does not involve education. Agreeableness assesses one's interpersonal orientation and level of compassion and one's level of positive or negative orientation to others, while one of the aspects of ego development concerns the quality of the individual's interpersonal relations.

The significant correlation between extraversion and ego development with all 3 covariates simultaneously controlled suggests that it is the part of ego development that does not involve education and fluency together that is associated with extraversion. Extraversion, like agreeableness is a dimension concerned with interpersonal orientation. However, where agreeableness refers to one's positive or negative orientation to others and altruistic capacities such as concern and compassion, extraversion refers to one's preference for interaction with others and the quantity and intensity of one's desire for social activity and one's being assertive, active and talkative. This is interesting as it suggests that fluency is not necessary for the expression of that aspect of ego development that is associated with a dimension involving assertiveness, but surprising since the dimension of extraversion also includes talkativeness.

The relationship between Ego development and Volunteering

It appears that the amount of time spent volunteering is unrelated to ego development. It may be that it is participation in volunteer work that promotes higher ego development levels. Conversely, it is possible that ego development is an individual differences variable and as such a predictor rather than an outcome of volunteer activity. The question as to whether the current volunteers were higher in ego development to start with and possessed

co-occurring personality traits (openness) that influenced how they interacted with their environments including their choice to volunteer, or whether it is the volunteering experience itself that is partly responsible for the higher ego levels among current volunteers cannot be addressed within a cross-sectional design. Perhaps personality traits 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 lifespan. Longitudinal research is needed to measure the effect of a volunteering experience on the ego development of elderly individuals who have never before volunteered. If such studies do demonstrate that ego development can change as a result of a volunteering intervention for a sample of elderly adults, there will be implications for our understanding of the nature of personality: traditional trait theorists that maintain that personality is stable from early adulthood will be challenged by the development of an aspect of personality. Moreover the possibility of personality change in a sample of elderly adults will have implications for our understanding of the potential for growth and development in the elderly. This is especially important given the variety of unique and challenging experiences enjoyed by healthy elderly adults.

The results taken together attest to the

multidimensional nature of ego development and are consistent with Loevinger's conception of ego development as an umbrella or organizing construct. Furthermore, the ambiguous nature of the theory of ego development that makes it difficult to make a prediction regarding its potential for change is not surprising given the multidimensional nature of the construct. Some aspects of ego development may have the potential to change while other parts may be more stable.

Limitations

The generalizability of the results and conclusions of the present study are bound by the study's limitations. First, the study did not assess informal volunteering such as help given to friends or neighbours which also constitutes a 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. Finally, a larger sample would have meant more generalizable results.

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Appendix A

Consent Form for Current Volunteers

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 New and Former Volunteers

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

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 D

The Washington University Sentence Completion Test of Ego
Development, Form 81, short version

Loevinger (1985)

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 E

The Social Desirability Scale

Crowne & Marlowe (1964)

ATTITUDES AND TRAITS INVENTORY

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

	True	False
1. Before voting I thoroughly investigate the qualifications of all the candidates.	_____	_____
2. I never hesitate to go out of my way to help someone in trouble.	_____	_____
3. It is sometimes hard for me to go on with my work if I am not encouraged.	_____	_____
4. I have never intensely disliked anyone.	_____	_____
5. On occasion I have had doubts about my ability to succeed in life.	_____	_____
6. I sometimes feel resentful when I don't get my way.	_____	_____
7. I am always careful about my manner of dress.	_____	_____
8. My table manners at home are as good as when I eat out in a restaurant.	_____	_____
9. If I could get into a movie without paying for it and be sure I was not seen, I would probably do it.	_____	_____
10. On a few occasions, I have given up doing something because I thought too little of my ability.	_____	_____
11. I like to gossip at times.	_____	_____
12. There have been times when I felt like rebelling against people in authority even though I knew they were right.	_____	_____
13. No matter who I'm talking to, I'm always a good listener.	_____	_____
14. I can remember "playing sick" to get out of something.	_____	_____
15. There have been occasions when I took advantage of someone.	_____	_____

	True	False
16. I'm always willing to admit it when I make a mistake.	_____	_____
17. I always try to practice what I preach.	_____	_____
18. I don't find it particularly difficult to get along with loud mouthed, obnoxious people.	_____	_____
19. I sometimes try to get even, rather than forgive and forget.	_____	_____
20. When I don't know something I don't at all mind admitting it.	_____	_____
21. I am always courteous, even to people who are disagreeable.	_____	_____
22. At times I have really insisted on having things my own way.	_____	_____
23. There have been occasions when I felt like smashing things.	_____	_____
24. I would never think of letting someone else be punished for my wrongdoings.	_____	_____
25. I never resent being asked to return a favor.	_____	_____
26. I have never been irked when people expressed ideas very different from my own.	_____	_____
27. I never make a long trip without checking the safety of my car.	_____	_____
28. There have been times when I was quite jealous of the good fortune of others.	_____	_____
29. I have almost never felt the urge to tell someone off.	_____	_____
30. I am sometimes irritated by people who ask favors of me.	_____	_____
31. I have never felt that I was punished without cause.	_____	_____
32. I sometimes think when people have a misfortune they only got what they deserved.	_____	_____
33. I have never deliberately said something that hurt someone's feelings.	_____	_____