What's Important When: Personal Values in the Transition from Work to Retirement

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ABSTRACT

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This study examined differences between the current personal values of recently retired adults and retrospective reports of their pre-retirement values. The role that personal values play in the subjective well-being (SWB) of recent retirees was also investigated. It was hypothesized that achievement and power values would be perceived as lower after retirement, and that benevolence and universalism values would be perceived as higher after retirement. It was also hypothesized that goal adjustment capacity (GA) would predict the degree of reported difference between current and retrospective pre-retirement values. The pattern of relations among values and SWB for retirees was expected to differ from previous research findings based on younger adult samples. Self-report measures of current and pre-retirement values, GA, SWB, and demographics were administered to 385 recent retirees. HLM analyses revealed that differences between current and retrospective values were in the predicted directions. Age, education, and GA influenced achievement value ratings; gender influenced benevolence and universalism ratings; and power values were associated with education. Differences between current and perceived pre-retirement values were not explained by goal adjustment capacity. Regression analyses revealed that positive affect was predicted by reports of higher benevolence, self-direction, and stimulation values and negative affect was predicted by higher tradition and achievement values and lower self-direction values. Life satisfaction was predicted by lower tradition values as well as higher benevolence and conformity values. The results suggest that personal values and their relations to SWB vary along lifespan development.

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WHAT'S IMPORTANT WHEN: PERSONAL VALUES IN THE TRANSITION FROM

WORK TO RETIREMENT

We must adjust to changing times and still hold to unchanging principles.

Jimmy Carter

When people experience major transitions in life, such as moving to a new city or

country, entering the workforce, becoming a parent, or retiring from work, they are faced

with the challenge of adapting to changing circumstances while at the same time

maintaining some continuity in identity – in their sense of who they are. What happens to

core aspects of ourselves when the context and circumstances of our lives change in a

fundamental way? Do we hold on to core aspects of our identity, or do we adjust them to

match new opportunities and constraints? The aim of this study is to explore the

perceived continuity of a core aspect of the self – personal values – across a major

transition in the adult lifespan – the transition from work to retirement. The first part of

this research examines differences between current value ratings in retirement and

retrospective reports of pre-retirement values. Part one also examines characteristics of

people that are associated with value priorities and with differences between current and

retrospective value ratings. The second part of the study examines the degree to which

personal values predict subjective well-being in early retirement.

Personal values are thought to guide and influence behaviour across adulthood.

As a concept in social psychology, they have been defined in a variety of ways, but

generally values are conceived as answering questions of what is desirable in life

(Braithewaite & Scott, 1991). There is, however, great diversity in operational definitions

and measurement tools (Braithewaite & Scott, 1991). Influenced heavily by Rokeach

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(1973) and Kluckhohn (1951), Schwartz's (1992) value theory has become a popular basis for current research into values. Schwartz defines values as desirable trans-situational goals that serve as guiding principles in people's lives. Values are not, in this theory, moral judgments about the rightness or wrongness of certain beliefs or behaviour. Rather, values simply represent what an individual believes is important. As such, values motivate individuals to pursue goals that express what is important to them. Values can therefore be characterized by describing their central motivational goals. For example, self-direction values are described in terms of motivational goals such as independent thought and action-choosing, creating, and exploring (Schwartz, 1992).

Schwartz's research over the past decade (e.g., Bardi & Schwartz, 2003; Schwartz 1992; Schwartz & Boehnke, 2004; Schwartz, Melech, Lehmann, Burgess, & Harris, 2001; Schwartz, Verkasalo, Antonovsky & Sagiv, 1997) has yielded a set of 10 "universal" values. According to Schwartz (1992), the values are considered universal in the sense that they form a system of distinct motivations with a structure of relations among values that is consistent both within and across cultures. The values are also considered universal in that they are based on three fundamental requirements of human existence: biological needs of individuals, the need for coordinated social interaction, and survival and welfare needs of groups. Table 1 provides definitions of each value construct in terms of its central goal. To summarize, the constructs are as follows: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security.

Insert Table 1 About Here

Schwartz's (1992) value theory is not based on the moral worth of values, but it does acknowledge that not all values are behaviourally compatible. Actions taken in the pursuit of any one value (motivational goal) have psychological, practical, and social consequences that may conflict or may be compatible with the pursuit of other values. For example, the pursuit of social status and prestige and control or dominance of people and resources (power values) is likely to interfere with the goal of understanding, appreciation, tolerance and protection for the welfare of all people (universalism values). Similarly, the pursuit of personal success through demonstrating competence according to social standards (achievement values) may interfere with the goal of being helpful, honest, forgiving, loyal, and responsible to others (benevolence values). In contrast, the pursuit of benevolence values is congruent with the pursuit of universalism values, in that both motivate helping behaviour. A circular (quasi-circumplex) structure emerges from Schwartz's findings (see Figure 1) that represents the conflicts and congruities among the values postulated in his theory. Proximity on the circular continuum represents similarity of underlying motivation; distance represents conflicting motivation. The 10 value types are organized into four higher-order categories along two bipolar dimensions that are also shown in Figure 1. Openness to change opposes conservation on one dimension, and self-transcendence opposes self-enhancement on the other. Self-transcendence and self-enhancement values are the focus of the first part of this study; the full set of values is considered in the second part of the study in the prediction of subjective well-being.

Insert Figure 1 About Here

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The content and structural aspects of Schwartz's theory of basic human values have been assessed in over 200 samples in more than 60 countries (Schwartz & Boehnke, 2004). The data largely support a) the distinctiveness of the 10 values, b) the comprehensiveness of the values, and c) the ordering of the values postulated by the circumplex structure (see citations in Schwartz & Boehnke). Studies based on this value system have reported relations between value priorities and a variety of attitudes and behaviours. For example, associations have been demonstrated between Schwartz's measures of values and the following: voting and political preference (Barnea & Schwartz, 1998; Caprara & Zimbardo, 2004); attitudes toward war (Cohrs, Christopher, Moschner, Maes, & Kielman, 2005); preferences for relationship partner (Goodwin & Tinker, 2002); environmental and consumer attitudes (Grunert & Juhl, 1995); readiness for out-group social contact (Sagiv & Schwartz, 1995); cooperation and competition (Schwartz, 1996); and religiosity (Schwartz & Huismans, 1995). The set of values that form the basis of this theory have also shown consistent and systematic relations with background variables such as culture, age, education and gender, (Schwartz & Rubel, 2005) as well as the Big Five personality traits (Roccas, Sagiv, Schwartz, & Knafo, 2002).

While significant associations have been reported between values and age (e.g., Schwartz, 2005; Schwartz & Rubel, 2005), mean age and age ranges have not always been reported in research using the Schwartz value theory. Many of the samples studied have been students and generally include 18 to 24 year olds (Schwartz & Rubel, 2005). Of the samples that include adults, the age range and mean are often not clearly reported. For example, Schwartz & Rubel described their adult samples as "nationally" or

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"regionally representative", and suggested that these samples represent "the full range of adult ages, occupations, education levels, and so forth" (p. 1015), but no further specific information on the age of participants was provided. In one study where mean age was reported for several adult samples (Sagiv & Schwartz, 2000), all adult samples had a mean age under 40 years. It is presumed, therefore, that the "adult" samples represent adults generally under the age of 50 years. This presumption is also based on a question that Schwartz and Rubel (2005) pose in their review of gender differences in values in 127 samples from 70 countries. In considering future directions for values research, the authors speculate as to the nature of gender differences in values after the age of 45. Presumably if their samples adequately represented adults over 45 years of age, they would have been able to answer this question. The current study proposes the first application of the Schwartz (1992) theory of values specifically to the study of older adults and the retirement transition.

Previous research suggests that there is no prototypical response to retirement. Rather, there is enormous variability in the way that people cope with this transition. Kim and Moen (2001) describe retirement as a transformation of both social and physical worlds, when roles, relationships, and daily routines change, at the same time as there are shifts in income and health. While some studies have reported improved morale in retirement (Gall, Evans & Howard, 1997), others report the opposite (Richardson & Kilty, 1991). Adjustment difficulties do occur, however, in a significant proportion of retirees, with some estimates as high as 30% (Braithewaite & Gibson, 1987; McGoldrick & Cooper, 1994). An examination of the resources and processes that facilitate adjustment to retirement is of current social importance for two reasons: 1) the large

cohort from the baby boom generation (born between 1946 and 1964) is now approaching retirement age, and 2) people are now entering retirement in better health and living longer (Horn & Meer, 1987; Kim & Moen, 2001; Kiyak & Hooyman, 1999) which means that large numbers of people in current and future generations will live approximately 25% of their lives in post-employment (Walker, 1999). Understanding adjustment to this phase of life is in the best interest of policy makers, mental health professionals, and the increasingly large set of people preparing for or living in retirement. Investigating adjustment to retirement is also interesting at the level of basic research: the prolonged retirement that the currently retiring cohort will experience is historically novel, and so, therefore, is an examination of the psychological processes of healthy older people within this post-employment stage of adult life.

Values and age

Past research that has investigated personal values has been conducted primarily with samples of students and young adults. Values are thought to be relatively stable because by definition they guide behavior across different contexts. Values are not, however, presumed to be stable across all stages of the lifespan. Developmental theory suggests that one's position in the lifespan makes the pursuit of certain values more rewarding and the pursuit of other values more costly. If this is so, it may be beneficial for individuals to adjust their values to the situational and biological opportunities and constraints of different life stages. They may do so by upgrading the importance they attribute to values they can readily attain and downgrading the importance of values whose pursuit is blocked by life circumstances (Schwartz, 2005). While the adjustment of

personal values based on position in the lifespan has been hypothesized (e.g. Schwartz, 2005), such a phenomenon has yet to be empirically investigated.

It seems reasonable to assume that as people age, their priorities and guiding principles shift. Schwartz and Rubel (2005) reported that in samples of adults (age range unknown) across seven countries who completed the value measure used in this study, age accounted for up to 10 percent of variance in value ratings. Schwartz et al., (2001), in an examination of values in representative national samples from Italy and South Africa, reported that age showed small positive correlations with conservation values (tradition, conformity, security) as well as self-transcendence values (benevolence and universalism) and small negative correlations with openness to change values (self-direction and stimulation) as well as self-enhancement values (power and achievement). An important caveat regarding these results, however, is that the participants in this study were recruited and interviewed exclusively through cell phones, suggesting that it likely included mainly young adults. Schwartz et al. (2001) described their large samples as "nationally representative", but did not report mean age or age range of their participants.

While this correlational research suggests that as people grow older, they are more concerned with conservation and self-transcendence, and less concerned with openness to change and self-enhancement, it is not clear that these results could be generalized to a sample of adults over 50 years old. Nor is it clear whether these age differences in values are due to cohort differences or developmental trajectories. The first part of the current study attempts to clarify the importance placed on four values of hypothetically high salience during the transition to retirement. Two self-transcendence values (benevolence and universalism) and two self-enhancement values (power and

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achievement) are investigated in terms of their importance in mid to late adulthood, and in particular in terms of how current ratings of these values differ from perceived pre-retirement values.

Values and Gender

The conclusions found in the psychological literature on gender differences in value priorities are inconsistent (see Prince-Gibson & Schwartz, 1998 for a review). From a theoretical point of view, some argue that stable gender differences, based on biology, evolution, and socialization, result in women being more relational, expressive, and communal and men being more autonomous, instrumental, and agentic (Prince-Gibson & Schwartz, 1998). Others argue from the constructionist/interactionalist point of view that gender-related behaviour is fluid and variable, depends on context, and that stable gender differences in values do not exist. Past research using the Schwartz value theory has consistently reported small or no differences between the genders in value priorities (Prince-Gibson & Schwartz, 1998: Schwartz et al., 2001). A recent investigation of gender differences in value priorities (Schwarz & Rubel, 2005) examined findings from 127 samples in 70 countries (N=77,528). The findings suggest that, in general, men place more importance on the self-enhancement values (power and achievement) and women place more importance on the self-transcendence values (benevolence and universalism). The differences between the genders, however, were very small: gender accounted for between .06 and 2.6 percent of the variance in value ratings, and accounted for much less variance than did age or culture. It is important to emphasize again that these results are based on samples generally under the age of 50 years. The authors, in a discussion of the interaction of values and age, wonder "whether differences in power values decrease or

even reverse when, after around the age of 45 years, men pass the peak of their

occupational and sexual striving and women experience greater independence" (p. 1023).

A convergence of gender differences in mid life has been supported by a collection of

studies that indicate that men and women are most different in terms of gender-role

identities in late adolescence and early adulthood but that they become increasingly

similar towards midlife and older adulthood (Huyck, 1990). The current study addresses

the question of whether the personal values that show the greatest gender differences in

younger adulthood (power, achievement, universalism, benevolence) also show gender

differences in older adulthood.

Values and Education

Western education promotes intellectual openness, flexibility and independence

of thinking, and the challenging of prevailing norms (Schwartz et al., 2001). Consistent

with the experiences provided by higher levels of education, Schwartz (2005), in a review

of his cross-cultural studies, reported that level of education is most positively related to

self-direction values and most negatively to conformity, tradition, and security values. In

terms of the self-enhancement vs. self-direction dimension, achievement showed a small

but significant association with education ($r = .16$), but, power, benevolence, and

universalism showed weak and inconsistent associations with this background variable.

Education was expected to play only a small role, therefore, in predicting these values in

retired adults.

Values and Goal Adjustment

A process of adjusting values to life circumstances and position in the lifespan has

been hypothesized by Schwartz (2005) but has not yet been empirically tested within

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individuals. Such a process, however, is consistent with theories of goal regulation in which personal goals are adjusted to situational constraints and commitment to unattainable goals is downgraded in an adaptive, accommodative process (Baltes & Baltes, 1990; Brandtstadter, 2002; Carstensen, Isaacowitz, & Charles, 1999; Heckhausen, 2002; Wrosch, Scheier, Carver, & Schultz, 2003). In theory, values and personal goals are modifiable for the same reasons and through similar mechanisms.

Goals vary in their level of abstractness, with the most concrete goals representing daily tasks and the most abstract goals representing core values of the self (Wrosch et al., 2003). Values, then, can be understood as higher-order abstract goals that are central to a sense of self. Giving up on goals often connotes failure in Western society where persistence and perseverance are all-important virtues in the struggle for success. Research has demonstrated, however, that the ability to let go of goals when they become impossible to attain is an important aspect of personal development and self-regulation (Wrosch et al.).

It is much easier to disengage from concrete goals that have little connection to core values than to disengage from core values. Nonetheless, even higher-order goals can become impossible to achieve due to a variety of factors, including the biological resources that are available at different points in the lifespan, as well as age-normative constraints. Both of these factors are potentially at play in the process of exiting the work force, and may put new retirees in the position of having to "step outside their existing framework and develop new goals altogether" (Wrosch et al., 2003, p. 7).

In the transition from work to retirement, work-related goals generally need to be abandoned, and individuals are confronted with finding new meaningful activities to

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pursue. But letting go of personal goals can be difficult: it can result in decreased well-being and increased psychological distress (Carver & Scheier, 1990). Re-engaging in new goals presents another set of motivational and behavioural challenges. It has been hypothesized that there are individual differences in capacities for goal disengagement and goal re-engagement, and that these capacities for goal adjustment are adaptive in coping with transitions in the lifespan, especially for older adults (Carver & Scheier, 1998; Wrosch & Scheier, 2003; Wrosch et al., 2003). In support of this argument, recent research has demonstrated that people's capacity to disengage from unattainable goals and to re-engage with new goals is associated with a higher quality of life (Wrosch & Scheier, 2003; Wrosch et al., 2003).

Retirement presents a unique set of circumstances in the lifespan. Individuals are faced with the challenge of maintaining a coherent sense of identity across a major restructuring of their time and activities, and through the loss of their occupational role and possible shifts in family, social, and leisure roles. The challenge of replacing the structuring of time by work with a self-imposed structuring of time and activities may be dealt with by maintaining patterns of thinking and living that have been established over several decades of adulthood. However, individuals also face the opportunity to recreate day-to-day life in a fundamental way, and past patterns may no longer be adaptive in the new circumstances of retirement. New goals, new activities, new social networks, and new priorities may be beneficial in post-work life if the individual is willing and able to pursue them. Goal adjustment capacity, then, may facilitate a shifting of higher order goals (values) to accommodate the new opportunities and constraints of retirement.

Autobiographical Memory and Self-Perceived Change

This study involved asking retirees to think back into their pasts and to recall what was important to them ten years before they retired. The role of memory is therefore an essential consideration in the framing of any observed differences between current and retrospective value ratings. Research in autobiographical memory, or memory for one's personal past, has consistently shown that remembering one's past is a process of active reconstruction. Ross and Conway (1986) reviewed research on personal recall and made the following conclusions about the process of remembering one's own past: 1) recall can be selective, in the sense that we dig up only a subset of our experiences; 2) over time we come to see things differently, i.e. we re-interpret and re-explain our pasts; and 3) we forget, and we fill in the gaps in memory by inferring what probably happened. In addition, we tend to interpret the past in terms of the present: current beliefs, knowledge and perspectives can influence what we remember and how we interpret that information (Ross & Buehler, 1994). Biases are, therefore, inevitably involved in the autobiographical recollections of older adults. Biases are perhaps even more involved when people are asked to recall their personal qualities as opposed to specific events, as personal qualities are not anchored to time or reality in the way that specific events are.

An example of such biases in the recollection of past characteristics is represented in a longitudinal study by Woodruff and Birren (1972) that examined how people rated themselves on a scale of social and personal adjustment at both age 20 and age 45, as well as how they recalled their level of adjustment 25 years earlier. Results suggested that while reports of adjustment had not significantly changed over time, participants remembered themselves as more poorly adjusted than they actually were at about age 20.

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In other words, they had perceived an improvement in adjustment that had not actually occurred.

McFarland, Ross, and Giltrow (1992) point out that there are two possible explanations for the perceived improvement in adjustment over time. One is that people want to believe that their level of adjustment improves over time, and therefore they reconstruct their past in a manner that allows them to believe that they have improved. The other is that individuals reconstruct a past self based on stereotypical qualities of people at a given age and on general lay theories regarding qualities that change with age. There is evidence to support both of these positions. The first position is supported by a series of studies conducted with undergraduate students and their parents, in which results suggested that people tend to praise their present selves and derogate past selves (Wilson & Ross, 2001; Ross & Wilson, 2003). These authors found that both undergraduate students and their parents were more critical of distant past selves than of current selves, and that they perceived greater improvement for themselves than for others over the same time period. The second position is supported in the findings of McFarland, Ross, and Giltrow (1992), where older adults' recollections of their personal attributes were shown to depend on implicit theories about the kinds of changes that are associated with aging.

In terms of the long-term recall of personal values, two positions are possible from the point of view of autobiographical memory biases. The first is that retirees may perceive differences between their current and pre-retirement value systems because they benefit psychologically from criticizing a distant, earlier self, and evaluating their current selves more favorably (Wilson & Ross, 2001). The other is that retirees recall their pre-

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retirement values based on implicit theories about the stability of values over time and stereotypes regarding the values of middle-aged workers vs. those of retirees. There is no evidence to suggest what kind of implicit theories people hold regarding perceived stability or instability of personal values from work to retirement, though values are, by definition, considered relatively stable (Schwartz, 1992). There is, however, some evidence regarding self-perceived change in other qualities of persons over the life course.

Previous research investigating self-perceived change and the subjective life course has relied on comparisons between a combination of retrospective, current, and prospective measures, and has yielded insight into the subjective experience of change across the lifespan (Cross & Markus, 1991; Fleeson & Heckhausen, 1997; Gold, Andres, & Schwartzman, 1987; Markus & Nurius, 1986; Ryff, 1982, 1991; Ryff & Heincke, 1983; Wilson & Ross, 2001). Research on self-perceived lifetime personality has shown that individuals see themselves as being somewhat different from their past to present to future selves in terms of well-being and various aspects of personality (see Fleeson & Heckhausen, 2001 for a review). In particular, perceived changes in personality appear to reflect general themes of exploration in early adulthood, productivity in middle adulthood, and later adulthood comfortableness (Fleeson & Heckhausen). However, in general, personality and other qualities of self appear to be perceived as more continuous than different over adulthood, supporting a model of continuing development of traits already present rather than qualitatively distinct change. Regarding implicit ideas about change with age, there are multiple stereotypes about aging representing both positive and negative views of typical older adults (see Hess, 2006, for a review). Whatever the

stereotypes are, there is evidence to suggest that older adults tend to regard themselves as better than average on dimensions of psychosocial and cognitive functioning (Pushkar, Arbuckle, Rousseau & Bourque, 2003). Recent evidence also suggests that stereotypes are incorporated into the self-concept only when close others are perceived as believing in the stereotype (Sinclair, Hardin & Lowery, 2006). The potential role of stereotypes about age and change in the process of autobiographical recall of personal values by middle-aged adults, remains, therefore, unclear.

Another possible influence on the recall of past values is the process of maintaining continuity in central aspects of self that is proposed by continuity theory (Atchley, 1999). This theory suggests that across transitions in older adulthood, individuals attempt to maintain an internal psychological continuity of self as a means of preserving strengths and minimizing the negative effects of aging. If a value is considered central to a sense of self, then continuity in that value across the retirement transition may be an expected perception of retirees. If, on the other hand, a value is considered context-bound, then it may be less important to a continuous sense of self, and may be more likely to be perceived as different from past work life to present retirement.

This study does not attempt to identify or explain the particular biases involved in the retrospective reporting of personal values, though they are considered in the interpretation of the results. The goal of this study, rather, is to describe reported differences in personal values from work to retirement, and to examine how background characteristics may account for variation in value ratings and for any reported differences between current and retrospective ratings.

Subjective well-being

Subjective well-being represents the global well-being of individuals in terms of their happiness and satisfaction with life. It is important as a psychological construct in that it can serve as a summary statement about the quality of an individual's experience of life (Andrews & Robinson, 1991). In this study, a positive experience of early retirement is operationalized as the extent to which participants rate themselves as high on measures of subjective well-being. It is important to define subjective well-being in more detail before proceeding to a discussion of it as an outcome variable. It is generally acknowledged that there are two components to subjective well-being: 1) a cognitive component representing intellectual appraisal of satisfaction with life; and 2) an affective component, representing emotional well-being (Diener, Suh, Lucas, & Smith, 1999). Affect can be further subdivided into two dimensions that are relatively independent: positive affect (PA) and negative affect (NA) (Watson, Clark, & Tellegen, 1988). PA is characterized by feeling enthusiastic, active, and alert. When PA is high, a person experiences high levels of energy, concentration, and pleasurable engagement. When PA is low, a person experiences sadness and lethargy. NA, on the other hand, is characterized by the feeling of distress and can represent a variety of unpleasant moods, including anger, guilt, and fear. The absence of NA is experienced as a calmness or serenity (Watson et al.). A variety of life satisfaction, PA and NA scales have been developed and used in research, but generally a comprehensive measurement of subjective well-being considers each of its components: cognitive evaluations of life, the presence of positive emotions and the lack of negative emotions (Diener, 1994).

Values and well-being

There is some evidence to suggest that there may be a set of "healthy" values that are related to subjective well-being (Sagiv, Roccas, & Hazan, 2004). Sagiv and Schwartz (2000) examined the associations between the ten value types and measures of subjective well-being in two age group (students and adults) and in three cultures (West Germany, the former East Germany, and Israel). Their findings were consistent across age groups and cultures: achievement, self-direction, and stimulation values correlated positively with the affective aspect of subjective well being (SWB) (i.e. the presence of positive affect and absence of negative affect), whereas the inverse was found for tradition, conformity, and security values. All correlations, however, were weak to moderate, and less than $r = .25$. In addition, no values were related to the cognitive aspect of SWB (i.e. a person's satisfaction with life). Again, it should be noted that this research represents associations between values and well-being in students and adults generally under the age of 50, and may not reflect the "healthy" values of older adults who are at a different position in the lifespan. Achievement, self-direction, and stimulation are all values that are compatible with the pursuit of education and career, exploration of identity, and seeking of direction that characterize young adulthood. They may not, however, be as important for older adults who have established careers, relationships, families, and identities.

What may be more important for well-being than particular values is the fit between values and environment. Value-congruent environments allow individuals to express their values, attain their important goals, and consequently experience a sense of positive well-being (Sagiv et al., 2004). Sagiv and Schwartz (2000) found that particular

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values were more strongly associated with SWB when congruent with the prevailing value environment. This study compared students of business administration and psychology, hypothesizing that each environment has a prevailing value hierearchy, with business training supporting power and achievement values and psychology training supporting universalism and benevolence values. Among business students, those who reported higher power values and lower universalism values scored higher on measures of subjective well-being. In contrast, among psychology students, higher power values were associated with lower SWB.

Sagiv and Schwartz (2000) suggested that people seek out congruity between their values and their environment, regardless of their particular value hierarchies, because "people are more likely to experience positive well-being when they can express and fulfill their values and thus attain their goals" (p. 186). Similarly, Oishi, Diener, Suh, and Lucas (1999) provided evidence that activities are satisfying to the extent that they are congruent with an individual's values (e.g., the more an individual values achievement, the more satisfaction they get from achievement-related activities). The association between well-being and values, then, is perhaps less a matter of holding a particular set of "healthy" values, and more a matter of congruence between values and situational opportunities to pursue them (Sagiv et al., 2004). It is hypothesized that the opportunities and constraints of retirement affect which values facilitate well-being. The pattern of associations between values and well-being may therefore differ from previous reports based on younger samples. In particular, the reduced opportunities for expressing achievement values in retirement may result in these values being less involved in the well-being of retirees than in the well-being of students and working adults. In contrast,

the increased opportunities to express benevolence values in retirement may result in links between benevolence and well-being in retirement that have not been found at earlier stages of adulthood.

Hypotheses

For the first part of the study, the background variable gender was hypothesized, based on previous research, and on the theory of gender-role identity convergence in mid to late adulthood, to play at most a small role in individual differences in the importance of values. Based on previous reports of small but consistent gender differences in values, men were predicted to rate self-enhancement values higher than would women, and women to value self-transcendence more than do men.

Given the similarity of the life stage that all the participants shared (i.e., facing the early years of retirement from full-time work) age was not expected to account for variance in value ratings. Age differences in value priorities are presumably related to the demands and constraints of different life stages. While previous research has reported that age is positively associated with the self-transcendence values (universalism and benevolence) and negatively associated with the self-enhancement values (power and achievement), these differences were not expected to appear in a sample over the age of 50 years.

Based on previous research, education was expected to play a role only in terms of achievement values, with higher education predicting more importance placed on achievement values.

Given the opportunities and constraints of withdrawal from full-time employment, it was hypothesized that retirees would perceive differences in the importance of power,

achievement, universalism and benevolence values from their work life to their early retirement. In particular, in line with previous research and taking into account the opportunities and constraints of work life and of retirement, self-transcendence values (benevolence and universalism) were predicted to be perceived as more important in the present than in the past, and self-enhancement values (power and achievement) were predicted to be perceived as less important in the present compared to the past.

In terms of the characteristics of people that might be associated with differential current and retrospective value ratings, it was hypothesized that higher goal adjustment capacity (goal disengagement and goal re-engagement ability) would be associated with a larger difference between reports of current and retrospective values.

For the second part of the study, which examined relations among current values and SWB in retirement, the following hypotheses were made: 1) self- enhancement values (achievement) would be negatively related to SWB, and 2) self-transcendence values (benevolence and universalism) would be positive predictors of SWB. Achievement values (the self-enhancement dimension) are, in theory, the guiding principles that are most compatible with the building and advancement of a career. Prioritizing this value through the working years is likely beneficial in that the environment of work allows, if not encourages, the pursuit and expression of achievement. Achievement may, however, be more difficult to express in retirement without the structure, hierarchies, and rewards of the workplace. The motivations of the self-transcendence dimension (e.g. universalism and benevolence) are, in theory, more compatible with the opportunities and constraints of retirement than the self-enhancement dimension, and reflect the concept of generativity (i.e. caring about future generations of

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people and about contributing to society) (McAdams, De St. Aubin, & Logan, 1993). Therefore, higher self-transcendence values (i.e. universalism and benevolence) were expected to be associated with higher ratings of life satisfaction, more positive affect, and less negative affect.

In addition, it was hypothesized that, in early retirement, openness to change values (self-direction, stimulation) would be adaptive in coping with unstructured time, and would therefore be positive predictors of SWB. The theoretical association between conservation values (tradition, conformity, security) and SWB in early retirement is more ambiguous. In samples of young adults, these values have shown negative relations with SWB. However, for older adults, conservation values could help, hinder, or have no relation to positive adjustment. Therefore, no hypotheses were made regarding these values as predictors of SWB.

Method

Participants

The current study was conducted within a larger study investigating adjustment to life in retirement. Information about the retirement study was distributed by mail to approximately 1000 recently retired employees of a major corporation in Quebec, as well as to the Montreal community through ads in both French and English local newspapers. The corporation involved in the study employs approximately 18,000 men and women in both blue and white-collar positions in the province of Quebec, and had approximately 500 new retirees annually over the last six years. The retirees' association of this corporation agreed to cooperate with this research program, actively facilitating the recruitment of participants. Criteria for participation included fluency in French or

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English, having retired within the past three years, having worked full-time for a minimum of 20 years, and not currently being in paid employment for more than 10 hours per week.

Out of a total of 389 retirees who participated in the larger study, three participants were excluded due to dishonesty in communication with the research coordinator, and one due to improper use of the response scales. The remaining sample consisted of 385 recent retirees, and was 46.2% male (n = 178) and 53.8 % female (n = 207). Participants ranged in age from 48 to 79 years, with a mean of 59.18 years (SD = 5.19). Participants were generally healthy and well-educated (M = 14.87 years of education, SD = 2.48) and the average length of career in paid employment was 34.76 years (SD = 6.87). Three-quarters (74.8%) of the sample were parents to at least one child. In terms of civil status, the characteristics of the sample were as follows: 50.5% married; 21.5 % divorced; 13.8 % single; 10.4 % common-law; and 3.7% widowed. In terms of language, 57.2% of participants completed the questionnaires in French and 42.8% in English. Participants recruited through the participating corporation consisted of 21.8% of the total sample (n = 81) and the remaining 78.2 % (n = 304) of participants were recruited from the community of the Montreal region.

Materials

A battery of measures was administered in the larger study on retirement. Only the measures used in the current study are described here. All materials were available in either English or French versions. The following self-report questionnaires were used to assess personal values, goal adjustment capacity, positive and negative affect, life satisfaction, and demographic characteristics (age, gender, and years of education):

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The Portrait Value Questionnaire IV (PVQ) (Schwartz et al., 2001): The PVQ is a

40-item scale that measures 10 personal values by asking participants to rate how much a

described person is similar to them (see Appendix A). Values are inferred from these

similarity ratings, thereby capturing values without explicitly identifying values as the

topic of investigation. Each value is represented by between three and six items,

depending on the conceptual breadth of the value. The items representing each of the ten

values are listed in Appendix B. Each item describes a person in terms of what is

important to him or her, and there are male and female versions of the scale. The two

versions are identical except for their use of "he" or "she" in the items. For example, a

man who values universalism is described as follows: "He thinks it is important that

every person in the world be treated equally. He believes everyone should have equal

opportunities in life." A woman who values achievement is depicted with similar gender-

specific wording: "Getting ahead in life is important to her. She strives to do better than

others." For each portrait, participants check one of six boxes, labeled as follows: very

much like me, like me, somewhat like me, a little like me, not like me, and not like me at

all. Internal reliability coefficients, from lowest to highest, were as follows: tradition

(.61); self-direction (.62); benevolence (.66); security (.67); stimulation (.69); power

(.70); conformity (.73); universalism (.77); achievement (.78); hedonism (.83), with a

mean alpha of .71 across the 10 values. Test-retest reliability of the PVQ is moderate to

high, depending on the value, ranging from .66 (self-direction) to .88 (conformity)

(Schwartz et al., 2001). Construct, convergent and discriminant validity of the PVQ have

been also demonstrated to be adequate through its association with a second method of

measuring the same ten value constructs, the Schwartz Value Survey (Schwartz et al.,

2001). In addition, as previously noted, values as measured by the PVQ have been associated with a variety of theoretically related attitudes and behaviours. Possible scores on the PVQ range from 1 to 6 for each value, where 1 represents a value of no importance to an individual, and 6 represents a value of high importance.

Each participant completed both a current and a retrospective version of the PVQ to assess differences between current and perceived pre-retirement values. The retrospective version uses the same format, except that it asks participants to think back to themselves as they were 10 years before retirement, and rate how much the portraits describe them as they were at that age (see Appendix C). The retrospective PVQ immediately followed another retrospective questionnaire that asked participants to think in some detail about their life circumstances and activities ten years before retirement. Participants were, therefore, already primed to look back on a specific time of their pre-retirement past. Ten years before retirement was chosen as the period for comparison with current values with the aim of capturing values in mid-career, and avoiding any effects of retirement preparation in the final years of full-time work.

Goal Adjustment Scale (GAS) (Wrosch, Scheier, Miller, Schulz, & Carver, 2003): The GAS is a 10-item self-report scale that assesses individual differences in ability to disengage from unattainable goals and to re-engage in new or alternative goals (see Appendix D). Participants first read the following incomplete statement: "If I have to stop pursuing an important goal in my life ..." They then rate 10 different completions of the statement on a 5-point scale from "strongly disagree" to "strongly agree". Four items reflect goal disengagement capacity (e.g., "I stay committed to the goal for a long time; I can't let go"), and six items represent goal re-engagement capacity (e.g., "I convince

myself that I have other meaningful goals to pursue"). Internal reliability was .96 for goal

disengagement items and .87 for goal re-engagement items in the current study. Scores

on the GAS have shown consistent associations with various measures of subjective well-

being (Wrosch, Scheier, Carver, et al., 2003; Wrosch, Scheier, Miller, et al., 2003).

However, the GAS has not been examined as a predictor of reported change in goals,

values, or activities. Once reversed items are taken into account, high scores on this

measure indicate a greater capacity to either disengage from important goals or to re-

engage with new goals.

Positive and Negative Affect Scale (PANAS) (Watson, Clark, & Tellegen, 1988):

The PANAS is a 20-item self-report questionnaire consisting of a list of words that

describe different feelings and emotions (see Appendix E). Participants are asked to rate

the extent that they have felt a given feeling or emotion during the past few weeks on a 5-

point scale that ranges from "very slightly or not at all" to "extremely." Ten items reflect

positive affect, and ten reflect negative affect. Internal reliability co-efficients were .90

for positive affect and .88 for negative affect in the current study. The PANAS has shown

adequate test-retest reliability and scale validity (Watson et al., 1988). Higher scores

represent a greater amount of either positive or negative affect experienced in the past

few weeks.

Life Domains Satisfaction Scale (LDS) (Pushkar, Conway, & Rousseau, in

preparation): The LDS is a 15-item self-report questionnaire that assesses current

satisfaction and expected change in seven life domains (physical health, financial

situation, relationships with family, relationships with friends, with significant other

relationship, relationships with children, and life period), as well as overall life

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satisfaction (See Appendix F). Participants respond to questions such as the following: "How satisfied are you presently with your relationships with your friends?" and rate level of satisfaction on a 5-point scale, ranging from "not at all" to "very much." Participants also respond to questions such as "What changes do you expect in your relationships with your friends in the next few years?" and rate expected change on a 5-point scale from "get much worse" to "get much better." Only six items reflecting current satisfaction in various life domains (excluding life period) were used in this study. The internal reliability co-efficient for the selected items was .70 in the current study. Higher scores represent a greater degree of satisfaction across several life domains.

Demographic Questionnaire. Background information about each participant was obtained through a demographic questionnaire created for the larger study on retirement (see Appendix G). Participants are asked to report their gender, age, highest level of education obtained, as well as other information about their financial and marital status, employment, living arrangements, and number of children.

Procedure

Individuals interested in participating contacted the researchers by telephone or email. Those who met inclusion criteria were given the choice of participating in either French or English, and then scheduled to come to Concordia University in groups of up to 6 people. Groups were arranged according to language preference, and all materials were administered according to the language of the group. Participants were mailed a demographic questionnaire and a set of other questionnaires to complete at home before coming to Concordia University.

Upon arrival at Concordia, they were offered refreshments before starting as well as a snack during a 20-minute break at the mid-point of the session. A tester fluent in the language of the group was present at all times to administer the materials and answer any questions about them. Participants generally took between three and four hours to complete the full battery of questionnaires and cognitive tasks that were involved in the larger study. The sequence of the materials was not randomized; materials were presented in the same order for all participants. The specific sequence of measures was used with the following goals: 1) to facilitate testing in the group environment, where many questionnaires required an introduction by the tester; 2) to allow participants to finish the first section at approximately the same time so that they could eat together and interact; 3) to maintain the morale of the participants over several hours of responding to sensitive and sometimes potentially emotionally difficult questions (e. g., about social support, life regrets).

In the first half of the session participants completed the consent form (see Appendix H) followed by the PANAS, current and then retrospective versions of the PVQ (interspersed within a larger battery). Following the break, participants completed the GAS, followed by the LDS (interspersed within a larger battery). Upon completion of the materials, participants received a cheque for $50.

Part 1

  Data preparation and cleaning. Data were complete for most variables: only a

small number of values were missing due to omission of items on the questionnaires

(e.g., 15 missing PVQ items; 5 goal disengagement, 5 goal re-engagement items; 1

negative affect item; 1 life satisfaction item). Missing responses were substituted with the

participant's mean across the other items measuring the variable. The variable that had

the most missing data was years of education (where missing data represented 4% of

cases). Missing data for education were handled through substituting the overall mean for

education. Data was not transformed for skewness for the HLM analyses in part one, but

was transformed, as described later, for the multiple regression analyses in part two.

  Descriptive statistics. The means and standard deviations of both current and

retrospective ratings of all 10 personal values are presented in order of highest to lowest

mean score in Table 2. The correlations between current and retrospective value ratings

are also presented in Table 2. In terms of the four values that are the focus of part 1, the

value with the highest overall current rating was universalism (M = 4.8, SD = .75),

followed by benevolence (M = 4.72, SD = .74), and then achievement (M = 3.22, SD =

1.06). The personal value with the lowest overall current rating was power (M = 2.70, SD

= 1.0). Paired samples t-tests indicated that the difference between each of these values

was significant: Benevolence scores were lower than universalism scores, $t(384) = -2.26$,

$p = .02$; achievement scores were lower than benevolence scores, $t(384) = 24.24$, $p <$

.001; and power scores were lower than achievement scores, $t(384) = 11.11$, $p < .001$.

Correlations between current and retrospective ratings of the four values examined in part

one ranged from .69 for achievement to .81 for universalism (see Table 2). Descriptive

statistics for demographic and goal adjustment variables are reported in Table 3. For

descriptive purposes, correlations between all demographic variables (age, gender,

education), goal adjustment measures (goal-disengagement and re-engagement) and all

10 current personal value ratings are indicated in Table 4. A Bonferroni adjustment of

alpha level to $p < .0003$ was selected to adjust for family-wise error.

Insert Tables 2, 3, and 4 About Here

Hierarchical Linear Modelling (HLM). It is important to clarify that in this study

the data is cross-sectional, and not longitudinal. This design assesses the difference

between retrospective and current reports of values within subjects, rather than objective

change across time.

While HLM is typically used for the analysis of change over 3 or more points in

time, it is equally capable of analysis of change across two data points. The only

difference is that in using two data points, curvilinear effects cannot be examined. The

advantages of using HLM over other kinds of statistical programs are its use of

sophisticated methods to reduce error of measurement, and its more nuanced examination

of variability in scores as compared to techniques based on mean comparisons.

HLM is hierarchical in the sense that level 1 models calculate estimates of the

intercept (score at time 0) and slope (change over time) of the outcome variable, and level

2 models examine characteristics of persons that may account for variation in the level 1

slopes and intercepts. HLM also provides an indicator of the total amount of variability in

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the data set that is due to differences between subjects. The intra-class correlation (ICC), which represents the proportion of between-subjects variability in the outcome variable, is calculated by dividing between-subjects variance (labeled *tau*) by the sum of *tau* and *sigma squared* (the indicator of within-subject variance). In building models, the amount of variance within persons that has been accounted for can be calculated by computing proportional changes in the value of sigma squared. Similarly, the amount of variance accounted for between persons from one model to the next can be calculated by computing proportional changes in the value of tau.

Sequential Hierarchical Linear Models. A separate model was created for each value (power, achievement, universalism, benevolence)[1]. The process and rationale of building sequential models will first be outlined, followed by the results for each of the four personal values.

The first (unconditional) level-1 model created for each value dimension was used to calculate the ICC, a measure of the proportion of variance in the outcome variable that was between-subjects. The unconditional models also indicate whether there are significant differences in intercepts among individuals on each value dimension (see Table Y), indicating that pre-retirement value ratings varied among participants.

The second level-1 model estimated the amount of within-subjects variance that could be explained by adding time (current or retrospective) to the equation as a predictor. Proportional changes in sigma squared values from the unconditional to the second level-1 models indicate whether or not time accounted for a significant amount of

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1. A preliminary analysis was conducted with all values in one model. The results were not in the predicted directions, and suppressor effects were suspected. In order to facilitate interpretation, separate models were constructed for each value.

within-person variation in scores. Level-1 analyses also indicate whether the effects of time on value scores were fixed (the same for all) or random (varying among participants).

Level 2 models were then created to examine the extent to which characteristics of persons were related to variance in the intercepts and slopes of the four personal values in this analysis. The level 2 variables that were entered as predictors of the intercept were age, gender, and years of education. Level-2 predictors were used to predict time slope only if random effects were observed, in which case the above demographic variables were entered as predictors of slope as well as two measures of goal adjustment (goal disengagement and re-engagement capacity). In other words, adding level 2 predictors to the model examined whether certain characteristics of persons *moderate* the importance of personal values pre-retirement, as well as the amount of difference reported between current and retrospective values ratings.

Achievement. The ICC in the unconditional model provided the estimate that 47% of variance in achievement scores was between-persons, while 53% was within-persons. Adding time to the level-1 model, the analysis revealed that, overall, current achievement values were lower than perceived pre-retirement ratings, $p < .001$ (see Figure 2 and Table 5), and the change in sigma squared indicated that time accounted for 19% of within-person variance in achievement scores. The level 1 analysis also revealed the presence of significant random effects $p < .001$ at the level of both the intercept and the time slope (see Table 6), meaning that both intercept and slope of achievement scores differed significantly between individuals.

Insert Figure 2 About Here

Insert Table 5 and 6 About Here

The results for the level 2 model regarding moderation of achievement intercept and slope by characteristics of persons are summarized in Table 7. Gender did not account for a significant amount of variance in intercept or slope of achievement scores. Age was a significant predictor of both intercept and slope of achievement scores, with older individuals reporting lower pre-retirement values, $p = .006$, as well as less decline in achievement values from pre to post retirement, $p < .001$ (see Figure 3). Education demonstrated a trend towards predicting achievement intercepts, with higher education being associated with higher pre-retirement achievement scores, $p = .06$. Education was, however, a significant predictor of amount of change in achievement values, with higher education predicting greater decreases in achievement scores from work to retirement, $p = .02$ (see Figure 4). Goal disengagement capacity (GD) was a significant predictor of achievement intercept, with higher GD being associated with lower achievement values pre-retirement, $p < .001$ (see Figure 5). GD was not, however, associated with the amount of change (slope) in achievement values. A similar pattern emerged for goal re-engagement capacity (GR). GR was a significant indicator of achievement intercept, with higher GR associated with higher achievement values pre-retirement $p = .005$. GR was not, however, associated with the slope in achievement scores (see Figure 6). The proportional change in the value of tau (intercept) from level 1 (1.32) to level 2 (1.23) indicated that the level 2 model accounted for 6.8% of variance in achievement scores at the intercept. The proportional change in the value of tau (slope) from level 1 (.40) to level 2 (.37) indicated that the level 2 model accounted for 8.5% of the variance in the amount of change (time slope) in achievement scores.

Insert Table 7 About Here

Insert Figures 3, 4, 5, and 6 About Here

Power. The ICC in the unconditional model suggests that 43% of variance in power scores was between-persons, while 57% was within-persons. Adding time to the level-1 model, the analysis revealed that, overall, current power values were lower than perceived pre-retirement power values, $p < .001$ (see Table 5 and Figure 2), and the change in sigma squared indicated that time accounted for 6.7% of within-person variance in power scores. The level 1 analysis also revealed the presence of significant random effects at the level of the intercept, $p < .001$, but not at the level of time slope (see Table 6), indicating that while pre-retirement power scores differed significantly between individuals, the amount and direction of change in power scores (slope) was similar for all participants.

The results for the level 2 model regarding moderation of power intercept by characteristics of persons are summarized in Table 8. No analysis was conducted to predict variance in the slope of power scores because a fixed (i.e., not random) effect of slope was found at level 1. In terms of predictors of pre-retirement power scores (intercept), neither gender nor age accounted for a significant amount of variance. Education was the only significant predictor of power intercept, with higher education predicting higher power scores, $p = .035$ (see Figure 7). GD and GR were hypothesized to be predictors of slope only, and were therefore not entered as predictors of the intercept. The proportional change in the value of tau (intercept) from level 1 (1.19) to level 2

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(1.16) indicated that the level 2 model accounted for 2.5% of variance in power scores at the intercept.

Insert Table 8 About Here

Insert Figure 7 About Here

Universalism. The ICC in the unconditional model provided the estimate that 38% of variance in universalism scores was between-persons, while 62% was within-persons. Adding time to the level-1 model, the analysis revealed that, overall, current universalism values were higher than perceived pre-retirement ratings, $p < .001$ (see Table 5 and Figure 2), and the change in sigma squared indicated that time accounted for .085% of within-person variance in universalism scores. The level 1 analysis also revealed the presence of significant random effects at the level of the intercept, $p < .001$, but not at the level of time slope (see Table 6), indicating that while pre-retirement universalism scores differed significantly between individuals, the amount and direction of change in universalism scores (slope) was similar for all participants.

The results for the level 2 model regarding moderation of universalism intercept by characteristics of persons are summarized in Table 8. Neither age nor education accounted for a significant amount of variance in the universalism intercept. Gender was the only significant predictor of the universalism intercept, with women reporting higher universalism scores than men, $p = .027$ (see Figure 8). The proportional change in the value of tau (intercept) from level 1 (.60) to level 2 (.58) indicated that the level 2 model accounted for 3.3% of variance in the universalism scores at the intercept.

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Benevolence. The ICC in the unconditional model provided the estimate that 28%

of variance in universalism scores was between-persons, while 72% was within-persons.

Adding time to the level-1 model, the analysis revealed that, overall, current benevolence

values were higher than perceived pre-retirement ratings, $p < .001$ (see Table 5 and

Figure 2), and the change in sigma squared indicated that time accounted for 0.2% of

within-person variance in benevolence scores. The level 1 analysis also revealed the

presence of significant random effects at the level of the intercept, $p < .001$, but not at the

level of time slope (see Table 6), indicating that pre-retirement benevolence scores varied

significantly between individuals, but the amount and direction of change in benevolence

scores (slope) was similar for all participants.

The results for the level 2 model regarding moderation of the benevolence

intercept by characteristics of persons are summarized in Table 8. Neither age nor

education accounted for a significant amount of variance in the benevolence intercept.

Similar to the pattern observed for universalism, gender was the only significant predictor

of the benevolence intercept, with women reporting higher benevolence scores than men,

$p = .002$ (see Figure 9). The proportional change in the value of tau (intercept) from level

1 (.40) to level 2 (.38) indicated that the level 2 model accounted for 5.0% of variance in

benevolence scores at the intercept.

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Part II

Data preparation. Scores on the PVQ were handled somewhat differently for part

two. For the HLM analyses, all items representing the different values were entered with

dummy codes indicating which value they represented. No average score was calculated

for each personal value. For the regression analyses, the mean of the items representing

each personal value was first calculated, and then transformed for skewness as necessary.

All variables in the regression analyses were examined for skewness and the appropriate

transformations (square root, log, or inverse) were applied where necessary to bring the

ratio between the skewness co-efficient and the standard error of skewness to a value less

than 3.

Descriptive statistics. Descriptive statistics for current personal values are

reported in Table 2 and for demographic and subjective-well being variables in Table 3.

Predictors of Subjective Well-Being. Hierarchical multiple regression analyses

were conducted to examine demographic variables as well as personal value ratings as

predictors of subjective well-being scores. Three separate regression analyses were

conducted to investigate the different components of subjective well-being. In all

regressions, the demographic variables of age, gender, and years of education were

entered in the first step, and eight personal values were added in the second step. Two

values were excluded from the analyses, power and hedonism, to reduce co-linearity

among the predictor variables in the regression. The rationale for this is based on the

recommendations of the author of the scale to use a maximum of eight values as

predictors in a regression analysis (S. Schwartz, personal communication, October,

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2004). Power and hedonism were dropped from the analysis on theoretical grounds.

Given the findings regarding achievement in part one, and given the previous association reported between achievement and SWB (Sagiv & Schwartz, 2000), achievement was one of the values of the most interest to the researcher. The value most strongly associated with achievement was power ($r = .59$, $p < .0003$), which was therefore selected to be omitted to reduce co-linearity with achievement in the regression. The second variable omitted was hedonism, a decision based on the researcher's interest in comparing the pattern of associations between values and SWB in younger samples (Sagiv & Schwartz, 2000) and the current sample. As Sagiv and Schwartz did not find hedonism to be related to well-being, it was excluded from the current analysis as well.

In the first hierarchical regression with positive affect (PA) as the outcome variable, a total of 21% of the variance in PA scores was explained by the predictor variables, $F = 9.04$, $p < .001$ (see Table 9). At Step 1, the demographic variables gender and age accounted for 4.2% of the variance, with female gender and younger age predicting higher PA scores. At Step 2, only age remained a significant demographic predictor after adding personal values into the model. The second stage indicated that higher levels of PA were associated with participants who are younger, and for whom benevolence, self-direction, and stimulation values are more important. Personal values accounted for 16.8% of the variance in PA scores beyond demographic variables.

Insert Table 9 About Here

In the second hierarchical regression, with negative affect (NA) as the outcome variable, a total of 12.5% of the variance in NA scores was explained by the predictor variables, $F = 4.86, p < .001$ (see Table 10). At Step 1, the demographic variables gender and years of education accounted for 3.9% of the variance, with female gender and less education predicting higher NA scores. At Step 2, only gender remained a significant demographic predictor. The second stage indicated that higher levels of NA were associated with female gender as well as higher tradition and achievement value ratings, and lower self-direction value ratings. Personal values accounted for 8.6% of the variance in NA scores beyond the demographic variables.

Insert Table 10 About Here

In the third hierarchical regression, with life satisfaction (LS) as the outcome variable, a total of 6.0% of the variance in LS scores was explained by the predictor variables, $F = 2.93, p < .001$ (see Table 11). At Step 1, demographic variables did not account for a significant portion of the variance in LS scores. However, at Step 2, gender and age became significant demographic predictors. The second stage indicated that higher LS scores were associated with male gender, younger age, as well as higher benevolence and conformity value ratings, and lower tradition value ratings.

Insert Table 11 About Here

Discussion

Part 1

Part one of this study involved an investigation of differences between current

ratings and retrospective pre-retirement ratings of self-enhancement values (achievement

and power) and self-transcendence values (benevolence, and universalism). As predicted,

power and achievement values were reported to be lower at the time of testing than ten

years before retirement. Also as predicted, benevolence and universalism values were

reported to be higher at the time of testing than 10 years before retirement. In terms of

variance accounted for, results were the most robust for achievement, where time

accounted for a moderate amount (19%) of within-person variance in scores. Time

accounted for a small amount of within-person variance in power values (6.7%). There

was much less change reported in the self-transcendence values, with time accounting for

less than one percent of within-person variance in both benevolence and universalism

scores. These results are consistent with previous studies that have reported small

associations between higher age and higher self-transcendence values, as well as between

higher age and lower self-enhancement values (Schwartz et al., 2001).

The lower current ratings of achievement and power values suggests that recent

retirees perceive themselves as being less concerned with being successful, capable,

ambitious, and influential (achievement values) and less concerned with having authority,

wealth, or social power (power values) than they were in the context of work. The small

but significant differences between retrospective and current ratings of benevolence and

universalism values suggest that recent retirees perceive themselves as being slightly

more helpful, honest, forgiving, loyal, and responsible (benevolence values) than they

were before they retired, as well as more broadminded and wise and more concerned with social justice and equality, peace, and protecting the environment (universalism values). The possible reasons for these perceived differences in values are twofold. One is that a normative change in priorities accompanies the process of exiting the workforce, based on the changing context of life. The other is that retirees perceive a decline in power and achievement and a slight increase in universalism and benevolence because of biases in autobiographical memory such as previously described tendencies toward enhancement of the current self or reconstruction of the past based on stereotypes and implicit theories of qualities that change with age. For example, in a self-enhancing reconstruction of the past, qualities of people that are less socially-desirable would be rated as more similar to the past self and less similar to the current self. If wanting to control or dominate others (power values) or to get ahead in life and do better than others (achievement values) are seen as inappropriate in the context of retirement, but reasonable in the context of work, then this bias may have caused higher retrospective, and lower current ratings of power and achievement. In contrast, qualities of people that are more socially desirable would be rated as similar to both current and past selves, with a slight advantage for the current self. If wanting to help others (benevolence values) and caring about peace, equality, and the environment (universalism values) are seen as positive qualities at any point in the lifespan, they may have been rated with a bias toward presenting the self in a positive light.

It could also be that stereotypes exist about the qualities possessed by a middle-aged worker and a recent retiree, and that these stereotypes were used as a basis for comparing the past worker-self with the current retired-self. Further, people may have

used implicit theories about how values change with age and position in the lifespan in order to construct a version of themselves and their values ten years before retirement. A further possible interpretation in the context of continuity theory is that benevolence and universalism showed little difference between current and retrospective ratings because they are more central to a sense of self, and were therefore perceived as relatively continuous. Power and achievement, on the other hand, may have shown less continuity between past and present ratings because these values are less central to a sense of self, and perhaps more context-bound. While it seems plausible that the reported differences between current and perceived pre-retirement values are due to a combination of changing life context, memory biases, and an effort to preserve a continuous sense of self, there is unfortunately no way to disentangle these possible interpretations from one another given the methodology of the current study.

The observed differences between current and retrospective value ratings must be understood as participants' interpretations of their past self in relation to their current self. While it is tempting to understand these reported differences as self-perceived change, technically this is not accurate, as participants were not asked whether or not they felt their values had changed. To assess self-perceived change would have required a direct question regarding the degree to which participants felt that a given quality had changed from pre to post retirement. It seems unlikely that the reported differences between current and retrospective value ratings would be unrelated to a direct question about change in values. It could be, however, that participants who rated the two versions of the PVQ differently might not have reported change in values if they had been asked directly.

Gender differences. It was hypothesized that personal value ratings would be moderated by certain stable characteristics of persons. In terms of the moderation of value ratings by gender, the results supported the hypothesis that gender differences in value ratings would be small in a sample of older adults, and were in the predicted direction for self-transcendence values. Women rated the self-transcendence values higher than men, with gender accounting for 5% of variance in benevolence scores and 3.3% of variance in universalism scores. These results are consistent with Schwartz and Rubel's (2005) report of higher benevolence and universalism scores in women in over 80% of 127 samples across 70 countries.

In contrast to self-transcendence values, no differences were observed in self-enhancement values between men and women. This last finding is particularly interesting in that men have consistently reported higher power and achievement values than women across cultures (Schwartz and Rubel, 2005). The most obvious explanation for this finding is that samples studied by Schwartz and Rubel included primarily younger adults, in contrast to the current sample, which had a mean age of about 60 years. The absence of gender differences in power and achievement values in this study supports the theory that gender-role identity, which is most differentiated in young adulthood, converges to some extent in older adults (Huyck, 1990). The question that arises, however, is why would gender differences disappear in power and achievement values, but not in benevolence and universalism values? This finding suggests that the gender differences in benevolence and universalism values may be less dependent on context than are gender differences in power and achievement values, which reflect situational demands (e.g. competitive work-related stimuli). Men and women may become more similar in the

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importance they place on social status, prestige, and success (power and achievement) as sex-differentiated work-related contextual stimuli decrease, but women continue to hold benevolence and universalism as more important than men do, regardless of position in the lifespan. This pattern suggests a possible biological basis for the characteristically female concern for helping others, or it may reflect the result of socialized gender roles in providing child and elder care and kin keeping.

Age differences. The role of age as a moderator of personal values was expected to be minimal in a sample of adults generally over the age of 50 years. The results supported the hypothesis for three of the four values examined, with the exception of achievement. As hypothesized, there were no age differences in power, universalism, or benevolence values, either pre or post retirement.

In the case of achievement values, age was a significant predictor of scores at pre-retirement, as well as how much scores differed from work to retirement. Younger retirees reported higher achievement values pre-retirement than did older retirees. Younger and older retirees became more similar, however, in retirement. Both older and younger retirees reported essentially the same level of current achievement values. The greater self-perceived decline in achievement values from work to retirement for younger retirees suggests a possible effect of age in the workplace. Younger workers may be more concerned with success and demonstrating competence, perhaps as a result of uncertainty regarding how long they will continue to need to work. Older workers may see themselves as closer to retirement, having already accomplished such goals, or, alternatively, as having passed the point at which such goals can be achieved. It is also possible, however, that younger retirees remember their "working self" in a way that is

different than do older retirees, Younger workers may perceive a greater amount of difference between past and present selves than do older retirees, in that they feel the need to create distance between past "work" self and current "retired" self, whereas this need may be less in people who retire at an older age.

The piece of missing information in this picture is whether reasons for retirement are different between younger and older recently retired individuals. It is possible that people who retire at an older age have a different relationship to their work than do younger retirees. It could be that older retirees enjoyed their work more than younger retirees, and therefore remained in the workforce for a longer time. If this were the case, the type of motivation to work (intrinsic vs. extrinsic) may explain the relation between age at retirement and achievement values while working. Intrinsic motivation has been described as "doing something because it is inherently interesting or enjoyable," and extrinsic motivation as "doing something because it leads to a separable outcome" (Ryan & Deci, 2000, p. 55). An intrinsic motivation to work could presumably be associated with less desire for external signposts of success and recognition, and therefore lower achievement values. It should be noted that the items on the PVQ that assess achievement values appear to tap into only extrinsically motivating factors (admiration, success and competence as demonstrated to others; see Appendix C).

On the other hand, older retirees may have needed to work longer for financial reasons, in which case the pursuit of achievement may have been less important to them than simply creating the financial conditions necessary for retirement. Post hoc analyses support this speculation: age showed a negative association with a measure (included in the larger study on retirement) of perceived adequacy of finances ($r = -.20, p < .0001$).

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Differences in level of education between older and younger retirees could explain the link between age and financial situation, but in this sample there was no association between age and education (see Table 4). Taken together, these results suggest that the older people are when they retire, the less they are satisfied with their financial situation in the first few years of retirement, regardless of level of education.

The role of education. Results tentatively supported the hypothesis, based on previous research (Schwartz et al., 2001), that higher levels of education would predict higher achievement values. Level of education demonstrated a trend toward predicting differences in achievement pre-retirement, with more education being associated with greater concern for demonstrating competence and achieving success according to social standards. Once retired, however, those with higher and lower levels of education reported essentially the same levels of achievement values. More years of education, therefore, predicted a greater decrease in achievement values from work to retirement. In other words, similar to the effect of age on achievement values, education differentiated people in terms of achievement values before retirement, but not after retirement.

An unexpected result, not consistent with previous research, but theoretically palatable, is that a higher level of education also predicted more importance placed on power values. Given that achievement and power values are strongly correlated ($r = .59$, $p < .0003$; see Table 3), the effect of education on achievement and power values is consistent with the theoretical structure of relations among the values.

Goal adjustment capacities. The hypothesis that goal adjustment capacity would predict amount of difference between current and retrospective pre-retirement values was not supported in this study. For power, universalism, and benevolence values, the amount

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and direction of reported differences was similar for all participants, and therefore assessing for moderators of difference was not possible. The amount of difference between current and retrospective value scores varied significantly between participants only for achievement, but neither goal disengagment (GD) capacity nor goal re-engagment (GR) capacity accounted for these differences. These variables did, however, play an unexpected role in predicting achievement scores. While overall current achievement scores were lower than perceived pre-retirement scores, those higher in GD reported less concern for achievement, compared to those lower in GD, regardless of whether the ratings were current or retrospective. In other words, those who are more able to let go of unattainable goals seem to see themselves as less concerned with achievement, and those who have more difficulty letting go of goals see themselves as more-achievement oriented. It appears that lower GD, then, is associated with placing more importance on achievement. The more individuals believe that demonstrating their competence to the world is important, the more they may persist in the face of obstacles toward their goals, regardless whether the context is work or retirement. GD was unrelated to other background variables that are related to achievement (age and education; see Table 3), suggesting that age and education would not explain the shared variance between GD and achievement.

Goal re-engagement capacity (GR) also predicted differences between current and retrospective achievement ratings, but the results seem to contradict the findings for GD. For both high and low re-engagers, current achievement ratings were lower than perceived pre-retirement ratings. However, higher GR was associated with higher achievement on both current and retrospective ratings. In other words, ease of re-

engaging with new goals seems to be related to placing more importance on achieving

success and demonstrating competence. It is an apparent contradiction to say that, on the

one hand, achievement values are related to persistence in goal pursuit, and on the other

hand achievement values are related to finding new goals to pursue. However, this

paradox may point to the relative independence of the two kinds of goal adjustment. GD

and GR correlated in this sample at $r = .35$, $p < .0003$ (see Table 3), suggesting that while

these two capacities for goal adjustment are related, the ability to find new goals does not

necessarily mean that old goals will be discarded in the face of challenge. GR and GD

may be differentially associated with achievement because, for some people, the

importance of demonstrating success and competence is great enough to motivate them to

find new ways to express their values when their usual avenues become unavailable,

while for others, it drives them to persist in their previous goals, regardless of difficulties.

Part II

Part two of the study investigated eight personal values as predictors of subjective

well-being (SWB) in the early years of retirement. Results generally supported the

hypotheses, with a few exceptions, that self-transcendence and openness to change values

would be positive predictors of SWB for recent retirees, while self-enhancement values

would show the opposite association. To summarize, benevolence, self-direction,

stimulation, and conformity values were positively related to well-being, while tradition

and achievement values showed negative associations with SWB.

SWB and demographic variables. Overall, demographic variables accounted for a

small amount of variance in SWB scores in this sample of recent retirees. Collectively,

gender, age, and education accounted for 4% or less of variance in each of the three

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components of SWB. However, the results were generally consistent with previous

research involving associations between demographic variables and SWB (see Diener et

al., 1999, for a review). In the current study, and in others (e.g., Diener et al.), women

reported higher levels of both positive affect and negative affect than men did. This

finding could be a result of women actually experiencing more intense emotional lives

than men, but it could also represent gender differences in the reporting of emotional

experiences. Gender role stereotypes and social and cultural expectations may lead men

to present themselves as experiencing a more restricted range of emotion than women.

There was a more ambiguous association between gender and life satisfaction.

The zero-order correlation between the two variables was small and non-significant, and

gender as a predictor in the first step of the regression was also non-significant, but in the

second step, in combination with personal values, gender became a significant predictor

of life satisfaction, with the results suggesting that men are more likely to report a

satisfied life across several life domains. In other words, when co-varying out the effects

of personal values, men appear slightly more satisfied with life than women.

Age also related to SWB in ways that were consistent with previous research. In a

large study that examined the relations between age and SWB in 60,000 adults from 40

nations, Diener and Suh (1998) found that pleasant affect declined with age while ratings

of life satisfaction and NA exhibited little change across age cohorts. In the current study,

older age was related to lower positive affect and life satisfaction ratings, and unrelated to

the experience of negative affect. Diener and colleagues (1999) suggested that reported

decreases in PA with age may have to do with the assessment of only higher arousal

emotions such as excitement and enthusiasm. If PA were to be defined in terms of less

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intense feelings such as contentment and affection in research with older adults, it is possible that PA would not show a negative correlation with age.

Education has typically shown small but significant correlations with SWB that have been shown to be mainly due to the association between education and occupational status and income (Diener et al., 1999). Education may also contribute to SWB indirectly through allowing individuals to make progress toward valued goals and promoting adaptation in the face of change (Diener et al., 1999). In the current study, education was not associated with PA or LS. Rather, it was only a significant predictor of NA, with lower education being associated with more experiences of unpleasant emotions. In the context of retirement, where past occupational status and income level largely determine the size of one's pension, it makes sense that those with lower status and income while working might experience more NA in retirement due to financial constraints. If education is also related to adaptability in the face of change, then retirement may be a time at which those with lower education experience more difficulty than more highly educated and, in theory, more adaptable individuals.

Values and Positive Affect. The predictive power of personal values was most robust in the prediction of PA. Controlling for the demographic variables age, gender, and level of education, a moderate amount of additional variance (16.8%) in PA was accounted for by personal values. As predicted, participants who had experienced higher levels of positive affect in the past two weeks also placed more importance on benevolence. Universalism, the other self-transcendence value, showed the same zero-order correlation as benevolence with positive affect scores ($r = .27, p < .01$), and yet it was not a significant predictor of positive affect. The co-linearity between universalism

and benevolence ($r = .51, p < .01$) likely eliminated any effect of universalism in the regression analysis. Also as predicted, the openness to change values of self-direction (valuing independence, creativity, exploration) and stimulation (valuing excitement, novelty, and challenge in life) positively predicted participants' reports of positive emotions.

Values and negative affect. Personal values had less predictive ability for NA, but nonetheless accounted for 8.6% of variance in NA beyond the demographic variables. As hypothesized, higher achievement values were associated with higher levels of NA in recent retirees, and therefore lower affective well-being. This finding, however, is important to explain in relation to the zero-order correlations between achievement scores and the measures of affect. At the level of bivariate correlation, achievement was positively associated with PA ($r = .19, p < .0003$; see Table 4) and showed no association with NA. In the regression analyses, however, achievement showed no association with PA, and was a significant predictor of negative affect. These findings can be taken to mean that once age, gender, education, and other personal values are taken into account, the association between achievement and affective well-being becomes a negative one. This may have to do, in particular, with shared variance between achievement and self-direction values ($r = .28, p < .0003$; see Table 4). If there is a part of achievement values that is related to self-directed and creative goal pursuit, and this part of achievement is accounted for in the regression analysis by self-direction scores, then perhaps what remains is only the variance in achievement scores related to the external pressure to succeed and to demonstrate competence, resulting in an association between achievement and NA.

An unexpected but a theoretically sound result was that higher self-direction values (concern for independent thought and action) were associated with lower levels of NA. While the results are correlational, it seems possible that self-direction values play a protective role in the early years of retirement, allowing retirees to more easily adapt to unstructured time, and suffer fewer unpleasant emotional experiences. It is also possible, however, that unpleasant emotional experiences may lead to a lower sense of efficacy in terms of facing the challenges of retirement, and as a result in less interest in self-direction values. The other finding of note in terms of predictors of NA was the association between higher NA and greater concern for tradition values. This finding is consistent with previously reported weak but significant negative associations between tradition values and affective well-being (Sagiv & Schwartz, 2000). A speculative explanation for this association is that maintaining the traditions of the past or of religious practice may be associated with a kind of rigidity in thought and behaviour that can interfere with the ability to adapt to changing personal circumstances (i.e., retirement) and socio-cultural context (i.e., an increasingly individualistic, materialistic, technology-driven consumer society). The aspect of tradition values that involves acceptance of one's lot in life and being satisfied with what one has also potentially involves a certain degree of passivity in the face of challenging circumstances which may be associated with higher levels of negative affect. A perspective of acceptance could, in theory, be considered adaptive in a retirement context, but when combined with the other elements of the tradition construct as measured by the PVQ (humility, keeping up customs, and religious belief (see Appendix B), it did not show any benefits in terms of well-being for retirees.

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Values and life satisfaction. Of the three measures of SWB, life satisfaction showed the lowest degree of association with personal values, with values accounting for only 6% of variance in life satisfaction ratings beyond the demographic variables. Consistent with the results for affective well-being, higher benevolence values and lower tradition values were associated with higher ratings of life satisfaction. Benevolence and tradition were the only two values to play a role in both affective and cognitive ratings of well-being. Conformity values also figured in the prediction of life satisfaction ratings, with a greater concern for obeying social expectations and norms predicting higher satisfaction. Taken together, the findings for conformity and tradition values in the prediction of life satisfaction appear contradictory. Conformity and tradition, though both theoretically part of the conservation dimension, and moderately correlated ($r = .58, p <$ .0003; see Table 4), predicted life satisfaction in opposite directions in the regression analysis. It may be that conforming to social norms is beneficial to life satisfaction in retirement, but that tradition values narrow the target of conformity to particular institutions or customs which have a negative impact on life satisfaction. The process of conformity in general, then, may be adaptive for retirees, but conformity to traditional customs or religious institutions may have disadvantages in terms of SWB. The reasons for this, as previously mentioned, possibly have to do with a kind of rigidity that interferes with adaptability to changing circumstances. It is important to note here that while one of the items on the PVQ that assesses tradition (see Appendix B) has to do with religious belief, none are related to spirituality or faith. If there are benefits to these related constructs, they do not seem to be captured by the tradition items on the PVQ.

Lifespan patterns of value-SWB relations. In relation to Sagiv and Schwartz's

(2000) investigation of values and SWB, the current study shows a slightly different

pattern of relations between personal values and affective well being that is presumably a

result of the differences in the age ranges and life context of the samples. Sagiv and

Schwartz reported that in three student samples (mean age approximately 24 years) and

three adult samples (mean age approximately 40 years) adults across three cultures,

achievement, self-direction, and stimulation values correlated positively with the

affective aspect of SWB, whereas the inverse was found for tradition, conformity, and

security values. Participants in the current study differed from those in Sagiv and

Schwartz (2000)'s study in that they were adults over the age of 50 and had recently

retired from full-time employment. For retirees, the pattern between values and SWB was

similar to the younger samples in that self-direction and stimulation values were

associated with higher PA. In the context of recent retirement, a concern for being

independent in choosing goals (self-direction) is likely an adaptive quality when the

structuring of time is suddenly left to the individual after years of being primarily

determined by the demands of employment. In terms of stimulation values, a desire for

excitement, novelty, and challenge in life likely leads to the experience of more high-

arousal positive emotions, regardless of position in the lifespan.

The results from the current study differ from those of Sagiv and Schwartz (2000)

in several important ways. First, PA in recent retirees was predicted by benevolence

values, which was not the case in the younger samples. Presumably helping others is

something that recently retired adults have more opportunity to express, and perhaps

therefore more tendency to value, given the fewer restrictions on their time and increased

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need to find new ways to express themselves, compared to students and adults who are employed full-time. Second, in younger samples, valuing achievement predicted higher affective well-being, whereas in the current study, higher achievement values not only did not predict PA, but also predicted higher levels of NA. As suggested in the results from part one of the study, the context of retirement seems to be associated with a reduced importance placed on demonstrating competence and achieving success according to social standards. An additional conclusion that may be drawn, in light of the results of part two of the current study, is that placing value on achievement in retirement may be maladaptive in terms of affective well-being given the restricted opportunities to express achievement values outside of the workplace. That is not to say, however, that opportunities for achievement-oriented retirees do not exist. Pursuing volunteer work, education, sports, or hobbies within organizations that recognize and reward achievement may provide such opportunities to those who seek it.

A third difference in the pattern of relations between values and well-being between the current study and Sagiv and Schwartz's (2000) findings is that while in younger samples values in the conservation dimension (tradition, security, conformity) showed negative associations with affective well-being, in the current sample only tradition values were negatively associated with affective well-being. Security and conformity showed no association with NA for retirees and conformity actually showed a positive association with life satisfaction. This different pattern is again suggestive of the difference in demands and constraints in retirement than at earlier points in the adult lifespan. In particular, older age involves negative changes in the domains of health, friends, and family, and these inevitable losses may make self-restraint and conformity to

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social norms more important for the well-being of retirees than of younger adults. In addition, while placing importance on the stability of society, relationships, and of self (security values) was detrimental in terms of affective well-being for younger adults, such an emphasis on stability appears to be benign in relation to affective well-being in retirement.

The small association between conformity and life satisfaction may also be related to the co-linearlity between conformity and benevolence ($r = .29$, $p < .0003$). Conforming to social expectations and norms for retirees may involve conforming to expectations of being helpful to others once retired. Conformity may also be associated with having followed financial advice in preparing for retirement. It is also possible that valuing conformity is associated with a positive presentation bias. For those for whom politeness and proper behaviour are important, there may be an effect of impression management in their ratings of life satisfaction, as they may be more concerned with keeping up appearances.

Finally, in the current study there were small associations between values and the cognitive aspect of SWB, life satisfaction, whereas in previous research no associations were found. A different measure of life satisfaction may explain this finding; in the Sagiv and Schwartz (2000) study, the satisfaction measure was the 5-item Satisfaction with Life Scale (Diener, Emmons, Larsen, and Griffen, 1985) that asks participants to rate broad statements about their lives (e.g., In most ways my life is close to my ideal). The current study used an as yet unpublished Life Domains Satisfaction Scale where participants rate satisfaction across six life domains (e.g., family, friends, finances). This new measure may have provided respondents with a greater opportunity to report satisfaction in

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specific domains that are important to them and thereby capture elements of satisfaction that are not captured in global ratings of life satisfaction.

Limitations

This research represents the first examination of the transition to retirement in terms of perceived value continuity, as well as the first application of the Schwartz value theory to the study of lifespan transitions in older adults. While this study is novel and timely in its relevance to our aging workforce, there are inevitable limitations in the methodology and sample that impact how the results of this study should be interpreted and to what extent they are generalizable.

Correlational research. Firstly, the results of HLM and regression analyses are correlational in nature, and therefore claims of causality must be avoided. Though personal values seem to be affected by position in the lifespan, and appear to be implicated in the SWB of recent retirees, we cannot conclude that the retirement transition caused a value shift, nor can we claim that personal values are the causal root of well-being in retirement. Without a control group of non-retired individuals to compare with the recent retirees, it is impossible to know whether the reported differences between current and retrospective value ratings were a result of retirement, or simply a normative decline related more to age than to the end of full-time employment. If the reported differences did have to do with age and not retirement, it might be expected that older age would be associated with greater perceived differences. Post-hoc analyses revealed significant correlations between age and perceived difference in achievement and power values, but in the sense that younger retirees perceived a greater change than older retirees. Degree of perceived difference in values was not associated at

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all with duration of retirement. These limited analyses provide some support for the position that the observed differences between work and retirement values are not simply a function of growing older.

In terms of SWB, though it is plausible to think of values as shaping the lives that people lead and therefore as shaping well-being, it is also possible that affective and cognitive evaluations of life help to determine what individuals deem to be important. Values, then, may both shape and be shaped by life experiences.

Retrospective Methods. The use of retrospective research methods requires careful framing of results and conclusions because of the limitations inherent in asking people to remember their own past. In this study, participants were asked to make both current and retrospective judgments about themselves using the PVQ. Poor memory for the distant past and the reconstructive nature of autobiographical memory call into question the validity of comparing retrospective and current measures as a means of assessing change. Clearly this is not an objective measurement of change, although there is some evidence that retrospective methods can yield accurate data about specific elements of the past (e.g., Beehr & Nielson,1995). It seems clear, however, that in the case of asking for retrospective reporting of aspects of life that are more abstract, such as personal values, an interpretive process is at play. Regardless of the objective accuracy of the retrospective reports, the current study rests on the assumption that an individual's own *interpretation* of who they are now compared to who they used to be is a meaningful topic of investigation. The perceived development of one's personality over time, whether veridical or not, can be considered "an essential component of the present self-

concept," because perceived development represents the autobiographical story through which individuals understand themselves (Fleeson & Heckhausen, 1997, p. 125).

Definition of retirement. The nature of this sample of retirees also represents a limitation in that the findings are generalizable only to people in similar circumstances. The sample does include both men and women of varying education and income levels from a range of occupations who are retiring at different ages and who are living in widely scattered areas of greater Montreal. However, this study excluded several groups of people who fell outside of our definition of retirement (having worked full time for at least 20 years, currently working less than 10 hours per week) but who nonetheless do experience a transition to retirement. The women who were included in this study represent those who have had male-type career paths (i.e., those who started paid employment in their twenties and continued for the majority of their adult lives). Many women are likely to have had interrupted paid employment due to child-raising responsibilities, or to have had no official career outside of the home, and are therefore more likely to have been excluded.

Similarly, there are many people who work more than 10 hours per week for money who consider themselves retired. Traditional definitions of retirement, based on the idea of retirement as the end of work and the beginning of receiving retirement pension benefits (Atchley, 1988) are quickly becoming too narrow to encompass the range of situations and experiences that individuals in their later adult years will encounter. Due to changing social and economic conditions, retirement as a clean break from full-time work to no work at all is a decreasing phenomenon. There is an increasing tendency toward "blurred" exits from the workforce (Mutchler, Burr, Pienta, & Massagli,

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1997). The blurring between work and retirement occurs through multiple entrances and exits from the labour force as well as combinations of part-time work and retirement. Due to the economic trend of fewer guaranteed pensions (Ekerdt, 2004) and the increasingly limited availability of permanent full-time employment, retirees now and in the future are much less likely to have worked for a single institution, or to have worked within the same field, for their entire career. This pattern of multiple careers will likely affect both the size of acquired pension as well as the flexibility and motivation of the individual to continue to adapt to later-life work. Retirement, especially in the future, is likely to be qualitatively different than it has been in the past due to multiple social and economic factors, including the increase in proportion of the population that is retired to that which is working, and the potential inability of government pension plans to financially support the increasingly large retired population.

Retirement has also typically been conceived of and studied as an individual and male transition (Kim & Moen, 2001). The current study does, in contrast to retirement research of previous decades, represent the retirement experience of both genders. In previous generations few women were in the position to "retire" from a full-time career due to their restricted participation in the workforce and their involvement in raising families. Currently, however, nearly half the workforce is female, and most households are comprised of two workers facing eventual retirement, not one (Kim & Moen). These new conditions of living and working are changing the way we define retirement. It is no longer only a passage of the male individual from a lifetime of work to the reward of post-employment leisure. Retirement is now perhaps best understood as an evolving

period of transition for older adults, in which retiring individuals move from a structuring of time and resources that is career-centered to one that is more individually-defined.

Future Directions

Research into personal values has been conducted extensively in a variety of areas of psychology and sociology using the Schwartz (1992) value theory, but there remain some unanswered questions regarding what the value questionnaire actually measures. One of the most intriguing findings that has been reported consistently across cultures, and in the current study, is that benevolence and universalism values are two of the most important values, and power and achievement two of the least important. In other words, people the world over rate concern for helping others, equality, justice and for preserving the environment as the most important of their guiding principles, and they rate concern for success, wealth, control and dominance over others as the least important. While it is heartening to think that most people have the welfare of others at the top of their priority list, and that very few people are seeking power and authority with much interest, it is important to ask whether these findings represent the reality of our world. Is it possible that research instruments such as the PVQ measure peoples' idealized versions of themselves, or how they would like to be, rather than who they actually are? Future research should investigate the association between socially desirable response style and ratings of personal values to investigate the possible confound of impression management in the reporting of guiding principles in life.

Another possible explanation for the generally low rankings of achievement and power values is one of selective sampling. The sampling procedures used in psychological research usually do not capture those who are at the top of the socio-

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economic status and occupational hierarchies, and therefore exclude those who are in the highest positions of power and who may hold the highest power and achievement values. The number of people in the highest positions of power is invevitably much smaller than the number of people who work underneath them, the latter being more adequately represented in this and most other research in psychology.

It is also possible that the low ranking of power and achievement values has to do with the extrinsic nature of the goals involved (e.g., recognition by others, material wealth). While Sagiv and Schwartz (2000) acknowledge that power values represent extrinsic goals, a close examination of the achievement scale reveals that it includes exclusively extrinsic goals (e.g., seeking admiration of others and success) and does not represent intrinsically-motivated achievement. Needs for achievement based on personal mastery of skills or interests are not represented in the PVQ achievement items (see Appendix B). These needs seem better represented in the PVQ items that assess self-direction values in terms of valuing curiosity, pursuit of knowledge, independence, and creativity. Self-direction values were the highest-ranked values in this study both pre and post retirement. A non-significant post-hoc t-test between current and retrospective self-direction scores indicated that retirees did not see themselves as different from work to retirement along this dimension. This suggests that intrinsically-motivated achievement and extrinsically motivated achievement may be differentially affected by the transition to retirement, or differentially interpreted in the reconstruction of past working-self in relation to present retired-self.

In terms of memory biases, this study raises the question as to whether stereotypes exist in terms of the values people hold at different stages in the lifespan, and whether or

not people hold implicit theories regarding the stability of values over time. It would be interesting to investigate how younger adults rate their values currently and how they imagine their values might change as they get older. This kind of information, in combination with the data from the current study, would allow for at more precise look at the kinds of stereotypes that exist about values at different stages in the lifespan. Comparisons between retirees' current ratings and students' prospective ratings of their future values in retirement might shed further light on the issue of perceived change in values over time.

The associations reported in this study and elsewhere between personal values and subjective well-being raise the question of the precise mechanism through which values may have a positive impact in people's lives (if there is a causal effect at all). It is reasonable to ask whether values actually translate into behaviour, and if so whether it is goal-pursuing behaviour that mediates the relation between values and well-being. The strength of association between values and behaviour has been reported to vary among the ten values (Bardi & Schwartz, 2003). In a study of undergraduate students, Bardi and Schwarz reported that stimulation and tradition values were most strongly related to behaviour; hedonism, power, universalism and self-direction showed moderate associations with behavioiur; and security, conformity, achievement, and benevolence were only marginally associated with behaviours that express the values. It would be interesting to know if, in a sample of older adults, benevolence values would show stronger associations with benevolent behaviour, compared to students, due to the increased opportunities for retirees in the expression of benevolence. Moreover, it would be worth investigating possible differences in well-being between retirees who show

value-behavior congruence, and those who do not. Oishi et al. (1999) demonstrated links between value-activity congruence in young adults; in theory, a similar pattern should be found in older adults, but as yet this has not been empirically tested.

The association between goal adjustment capacities and change in various life domains merits further attention in future research. The finding that neither goal disengagement or re-engagement capacity predicted differences between current and perceived pre-retirement values suggests that capacity for change in general does not necessarily predict change at the abstract level of values. It would be interesting to know if, in a period of transition such as retirement, goal adjustment capacities predict changes at a more concrete level, such as in terms of day-to-day activities, or in health behaviours or patterns of consumer spending.

Finally, though this research was cross-sectional in nature, it represents only the first phase of data collection in a longitudinal examination of the transition to retirement that will provide further insight into continuity and change in the years following the end of full-time employment. The longitudinal nature of this on-going investigation will overcome many of the limitations of the current study and will focus on stability and change in personal values, subjective well-being, and other important variables such as health and activity levels over the course of five years. Many of the questions that are left unanswered by the current study will be explored in the years to come in an effort to better understand how individuals adapt to and recreate their lives in retirement.

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Appendix A
PVQ Current (Men)

Here we briefly describe some people. Please read each description and think about how much each person is or is not like you. Put an X in the box to the right that shows how much the person in the description is like you.

HOW MUCH LIKE YOU IS THIS PERSON?

	very much like me	like me	some-what like me	a little like me	not like me	not like me at all
1. Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.	☐	☐	☐	☐	☐	☐
2. It is important to him to be rich. He wants to have a lot of money and expensive things.	☐	☐	☐	☐	☐	☐
3. He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.	☐	☐	☐	☐	☐	☐
4. It's very important to him to show his abilities. He wants people to admire what he does.	☐	☐	☐	☐	☐	☐
5. It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.	☐	☐	☐	☐	☐	☐
6. He thinks it is important to do lots of different things in life. He always looks for new things to try.	☐	☐	☐	☐	☐	☐
7. He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.	☐	☐	☐	☐	☐	☐
8. It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.	☐	☐	☐	☐	☐	☐
9. He thinks it's important **not** to ask for more than what you have. He believes that people	☐	☐	☐	☐	☐	☐

very much like me	like me	some- what like me	a little like me	not like me	not like me at all

should be satisfied with what they have.

10. He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.

☐ ☐ ☐ ☐ ☐ ☐

11. It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.

☐ ☐ ☐ ☐ ☐ ☐

12. It's very important to him to help the people around him. He wants to care for their well-being.

☐ ☐ ☐ ☐ ☐ ☐

13. Being very successful is important to him. He likes to impress other people.

☐ ☐ ☐ ☐ ☐ ☐

14. It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without.

☐ ☐ ☐ ☐ ☐ ☐

15. He likes to take risks. He is always looking for adventures.

☐ ☐ ☐ ☐ ☐ ☐

16. It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.

☐ ☐ ☐ ☐ ☐ ☐

17. It is important to him to be in charge and tell others what to do. He wants people to do what he says.

☐ ☐ ☐ ☐ ☐ ☐

18. It is important to him to be loyal to his friends. He wants to devote himself to people close to him.

☐ ☐ ☐ ☐ ☐ ☐

19. He strongly believes that people should care for nature. Looking after the environment is important to him.

☐ ☐ ☐ ☐ ☐ ☐

20. Religious belief is important to him. He tries hard to do what his religion requires.

☐ ☐ ☐ ☐ ☐ ☐

	very much like me	like me	some-what like me	a little like me	not like me	not like me at all
21. It is important to him that things be organized and clean. He really does **not** like things to be a mess.	☐	☐	☐	☐	☐	☐
22. He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things.	☐	☐	☐	☐	☐	☐
23. He believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him.	☐	☐	☐	☐	☐	☐
24. He thinks it is important to be ambitious. He wants to show how capable he is.	☐	☐	☐	☐	☐	☐
25. He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned.	☐	☐	☐	☐	☐	☐
26. Enjoying life's pleasures is important to him. He likes to 'spoil' himself.	☐	☐	☐	☐	☐	☐
27. It is important to him to respond to the needs of others. He tries to support those he knows.	☐	☐	☐	☐	☐	☐
28. He believes he should always show respect to his parents and to older people. It is important to him to be obedient.	☐	☐	☐	☐	☐	☐
29. He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society.	☐	☐	☐	☐	☐	☐
30. He likes surprises. It is important to him to have an exciting life.	☐	☐	☐	☐	☐	☐
31. He tries hard to avoid getting sick. Staying healthy is very important to him.	☐	☐	☐	☐	☐	☐
32. Getting ahead in life is important to him. He strives to do better than others.	☐	☐	☐	☐	☐	☐

	very much like me	like me	some-what like me	a little like me	not like me	not like me at all
33. Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.	☐	☐	☐	☐	☐	☐
34. It is important to him to be independent. He likes to rely on himself.	☐	☐	☐	☐	☐	☐
35. Having a stable government is important to him. He is concerned that the social order be protected.	☐	☐	☐	☐	☐	☐
36. It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.	☐	☐	☐	☐	☐	☐
37. He really wants to enjoy life. Having a good time is very important to him.	☐	☐	☐	☐	☐	☐
38. It is important to him to be humble and modest. He tries not to draw attention to himself.	☐	☐	☐	☐	☐	☐
39. He always wants to be the one who makes the decisions. He likes to be the leader.	☐	☐	☐	☐	☐	☐
40. It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.	☐	☐	☐	☐	☐	☐

PVQ Items Representing the 10 Value Constructs

Power:
(#2): It is important to him to be rich. He wants to have a lot of money and expensive things.
(#17): It is important to him to be in charge and tell others what to do. He wants people to do what he says.
(#39): He always wants to be the one who makes the decisions. He likes to be the leader.

Achievement:
(# 4): It's very important to him to show his abilities. He wants people to admire what he does.
(#13) Being very successful is important to him. He likes to impress other people.
(#24): He thinks it is important to be ambitious. He wants to show how capable he is.
(#32): Getting ahead in life is important to him. He strives to do better than others.

Hedonism:
(#10): He seeks every chance he can to have fun. It is important to him to do things that give him pleasure.
(#26): Enjoying life's pleasures is important to him. He likes to 'spoil' himself.
(#37): He really wants to enjoy life. Having a good time is very important to him.

Stimulation:
(#6): He thinks it is important to do lots of different things in life. He always looks for new things to try.
(#15): He likes to take risks. He is always looking for adventures.
(#30): He likes surprises. It is important to him to have an exciting life.

Self-Direction:
(#1): Thinking up new ideas and being creative is important to him. He likes to do things in his own original way.
(#11): .It is important to him to make his own decisions about what he does. He likes to be free to plan and to choose his activities for himself.
(#22): He thinks it's important to be interested in things. He likes to be curious and to try to understand all sorts of things.
(#34): It is important to him to be independent. He likes to rely on himself.

Universalism:
(#3): He thinks it is important that every person in the world be treated equally. He believes everyone should have equal opportunities in life.
(#8): It is important to him to listen to people who are different from him. Even when he disagrees with them, he still wants to understand them.
(#19): He strongly believes that people should care for nature. Looking after the environment is important to him.

(#23): He believes all the worlds' people should live in harmony. Promoting peace among all groups in the world is important to him.

(#29): He wants everyone to be treated justly, even people he doesn't know. It is important to him to protect the weak in society.

(#40): It is important to him to adapt to nature and to fit into it. He believes that people should not change nature.

Benevolence:

(#12): It's very important to him to help the people around him. He wants to care for their well-being.

(#18): It is important to him to be loyal to his friends. He wants to devote himself to people close to him.

(#27): It is important to him to respond to the needs of others. He tries to support those he knows.

(#33): Forgiving people who have hurt him is important to him. He tries to see what is good in them and not to hold a grudge.

Tradition:

(#9): He thinks it's important **not** to ask for more than what you have. He believes that people should be satisfied with what they have.

(#20): Religious belief is important to him. He tries hard to do what his religion requires.

(#25): He thinks it is best to do things in traditional ways. It is important to him to keep up the customs he has learned.

(#38): It is important to him to be humble and modest. He tries not to draw attention to himself.

Conformity:

(#7): He believes that people should do what they're told. He thinks people should follow rules at all times, even when no-one is watching.

(#16): It is important to him always to behave properly. He wants to avoid doing anything people would say is wrong.

(#28): He believes he should always show respect to his parents and to older people. It is important to him to be obedient.

(#36): It is important to him to be polite to other people all the time. He tries never to disturb or irritate others.

Security:

(#5): It is important to him to live in secure surroundings. He avoids anything that might endanger his safety.

(#14): It is very important to him that his country be safe. He thinks the state must be on watch against threats from within and without.

(#21): It is important to him that things be organized and clean. He really does **not** like things to be a mess.

(#31): He tries hard to avoid getting sick. Staying healthy is very important to him.

Appendix C

Instructions for Retrospective PVQ

You have just been remembering your life as it was ten years before you retired. We would like you to continue remembering yourself at that age. Take a moment to think about what your priorities were, what your goals were, and what was most important to you in life at that time.

Earlier, we asked you to read descriptions of people and decide how similar they were to you. We ask you now to read the same descriptions, but this time think about how much each person resembles you as you were ten years before your retirement. Put an X in the box that shows how much the person in the description is like you as you were at that age.

GA

During their lives people cannot always attain what they want and are sometimes forced to stop pursuing the goals they have set. We are interested in understanding <u>how you usually react</u> when this happens to you. Please indicate the extent to which you agree or disagree with each of the following statements, as it usually applies to you.

If I have to stop pursuing an important goal in my life…	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. It's easy for me to reduce my effort towards the goal.					
2. I convince myself that I have other meaningful goals to pursue.					
3. I stay committed to the goal for a long time; I can't let it go.					
4. I start working on other new goals.					
5. I think about other new goals to pursue					
6. I find it difficult to stop trying to achieve the goal.					
7. I seek other meaningful goals.					
8. It's easy for me to stop thinking about the goal and let it go.					
9. I tell myself that I have a number of other new goals to draw upon.					
10. I put effort toward other meaningful goals.					

Appendix E
PANAS

This scale consists of a number of words that describe different feelings and emotions. Read each item and then circle the appropriate answer next to that word. Indicate to what extent you have felt this way _during the past few weeks_ by choosing the answer that _describes you best_. Use the following scale to record your answers.

1	2	3	4	5
Very slightly or not at all	A little	Moderately	Quite a bit	Extremely

1. Interested	1	2	3	4	5
2. Distressed	1	2	3	4	5
3. Excited	1	2	3	4	5
4. Upset	1	2	3	4	5
5. Strong	1	2	3	4	5
6. Guilty	1	2	3	4	5
7. Scared	1	2	3	4	5
8. Hostile	1	2	3	4	5
9. Enthusiastic	1	2	3	4	5
10. Proud	1	2	3	4	5
11. Irritable	1	2	3	4	5
12. Alert	1	2	3	4	5
13. Ashamed	1	2	3	4	5
14. Inspired	1	2	3	4	5
15. Nervous	1	2	3	4	5
16. Determined	1	2	3	4	5
17. Attentive	1	2	3	4	5
18. Jittery	1	2	3	4	5
19. Active	1	2	3	4	5
20. Afraid	1	2	3	4	5

LDS

We are interested in how you feel about different aspects of your life at the present time, and also what you think of people who are important in these different aspects of your life. We are also interested in how much you feel things might change for you in the future, in the next few years.

For each question, please circle the number that best represents how you feel.

PHYSICAL HEALTH

1. How satisfied are you presently with your physical health?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

2. What changes do you expect in your physical health in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

FINANCIAL SITUATION

3. How satisfied are you presently with your financial situation?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

4. What changes do you expect in your financial situation in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

RELATIONSHIPS WITH FAMILY (PARENTS, BROTHERS, SISTERS)

5. How satisfied are you presently with your relationships with your family?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

6. What changes do you expect in your relationships with your family in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

Please turn over

RELATIONSHIPS WITH FRIENDS

7. How satisfied are you presently with your relationships with friends?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

8. What changes do you expect in your relationships with friends in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

SIGNIFICANT RELATIONSHIP (SPOUSE OR PARTNER)

9. How satisfied are you presently with your relationship with your partner?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

10. What changes do you expect in your relationship with your partner in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

RELATIONSHIPS WITH CHILDREN

11. How satisfied are your presently with your relationship with your children?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

12. What changes do you expect in your relationship with your children in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

LIFE PERIODS

13. How satisfied are you presently with your retirement?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

14. What changes do you expect with your retirement in the next few years?

1	2	3	4	5
Get much worse	get worse	stay the same	get better	get much better

15. Overall, how satisfied are you now with your life?

1	2	3	4	5
Not at all	a little	somewhat	quite a bit	very much

Date _____

1. What is your sex? Male _____ Female _____

2. What is your date of birth? Year _____ Month _____

Date _____

3. What is your age? _____

4. What is the highest level of education you have completed? (please circle that

   which corresponds best)

Primary School :	1	2	3	4	5	6
Secondary School :	7	8	9	10	11	12
CEGEP/College :	Diploma					
University :	Bachelor's	Master's		Doctorate		

   Other (please indicate what, how many years)

   _____

5. What was your occupation?

   _____

6. When did you retire? Year _____ Month _____

   Date _____

7. How many years were you employed?

   _____

8. Do you receive a pension from your employer? Yes _____ No _____

9. At the time of your retirement, what was your annual salary?

_____

10. What is your present annual income (include all sources, e.g. RRSP's, etc.)?

_____

11. What is your total family income from all sources?

_____

12. Compared to other people of your age that you know, how would you rate your financial situation? (please circle the corresponding number)

    a. A lot worse than most

    b. Worse than most

    c. A little worse than most

    d. About the same as most

    e. A little better than most

    f. Better than most

    g. A lot better than most

13. What languages do you speak?

        French _____

        English _____

        Other (please specify): _____

14. What languages do you read and write?

        French _____

        English _____

        Other (please specify): _____

15. What is your civil status?

        Married   _____

        Single   _____

        Divorced   _____

        Widowed   _____

        Common-Law   _____

16. How many times have you been married? _____

17. Do you have children?   Yes_____   No _____

18. If yes, how many girls? _____   How many boys? _____

19. Who do you live with?

        Alone   _____

        Spouse   _____

        Brother/Sister _____

        Friend   _____

        Child(ren)   _____

        Other (please specify) : _____

20. How did you find out about this study?

_____

Appendix H
CONSENT FORM

This is to state that I, _____, agree to participate in the study on retirement being conducted by Drs Pushkar, Conway, Li and Wrosch from the Centre for Research in Human Development and the Department of Psychology at Concordia University.

I have been informed that:

1.   My participation in this study entails my completing a battery of questionnaires, including questionnaires about the activities I do, my physical health, as well as about various life domains including my well-being, memory, cognition and my attitudes.

2.   All information about me or any other person will remain completely confidential. Results from this study will be accessible only to the researchers involved in this study. They will be able to use the information for scientific purposes, such as for publications in scientific journals or presentations at scientific conferences, as long as I cannot be identified as a participant in this study.

3.   I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.

4.   This interview should last approximately four hours. I will receive a monetary compensation of $50 for the four hours.

5.   Because this study is a longitudinal study, I may be contacted again for an annual interview in 2006, 2007 and 2008. Each annual interview will last approximately four hours. I will receive $50 for each annual interview in which I will take part.

6.   I will receive a copy of the general results as they become available if I have indicated my name and address on the previous page.

7.   I understand the purpose of this study; I know that there is no deception involved.

8.   The person in charge of this study is Dr. Dolores Pushkar. She can be reached at (514) 848.2424, extension 7540, e-mail: retraite@alcor.concordia.ca

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

Name (please print) _____

Signature _____

Date _____

Witness _____

If at any time you have questions about your rights as a research participant, please contact Adela Reid, Research Ethics and Compliance Officer, Concordia University, at (514) 848-2424, extension 7481 or by email at areid@alcor.concordia.ca.

Table 1. Definitions of 10 Values in Terms of their Goals (Schwartz et al., 2001)

POWER: Social status and prestige, control or dominance over people and resources.

ACHIEVEMENT: Personal success through demonstrating competence according to social standards.

HEDONISM: Pleasure and sensuous gratification for oneself.

STIMULATION: Excitement, novelty, and challenge in life.

SELF-DIRECTION: Independent thought and action-choosing, creating, exploring.

UNIVERSALISM: Understanding, appreciation, tolerance and protection for the welfare of all people and for nature.

BENEVOLENCE: Preservation and enhancement of the welfare of people with whom one is in frequent personal contact.

TRADITION: Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self.

CONFORMITY: Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.

SECURITY: Safety, harmony and stability of society, of relationships, and of self.
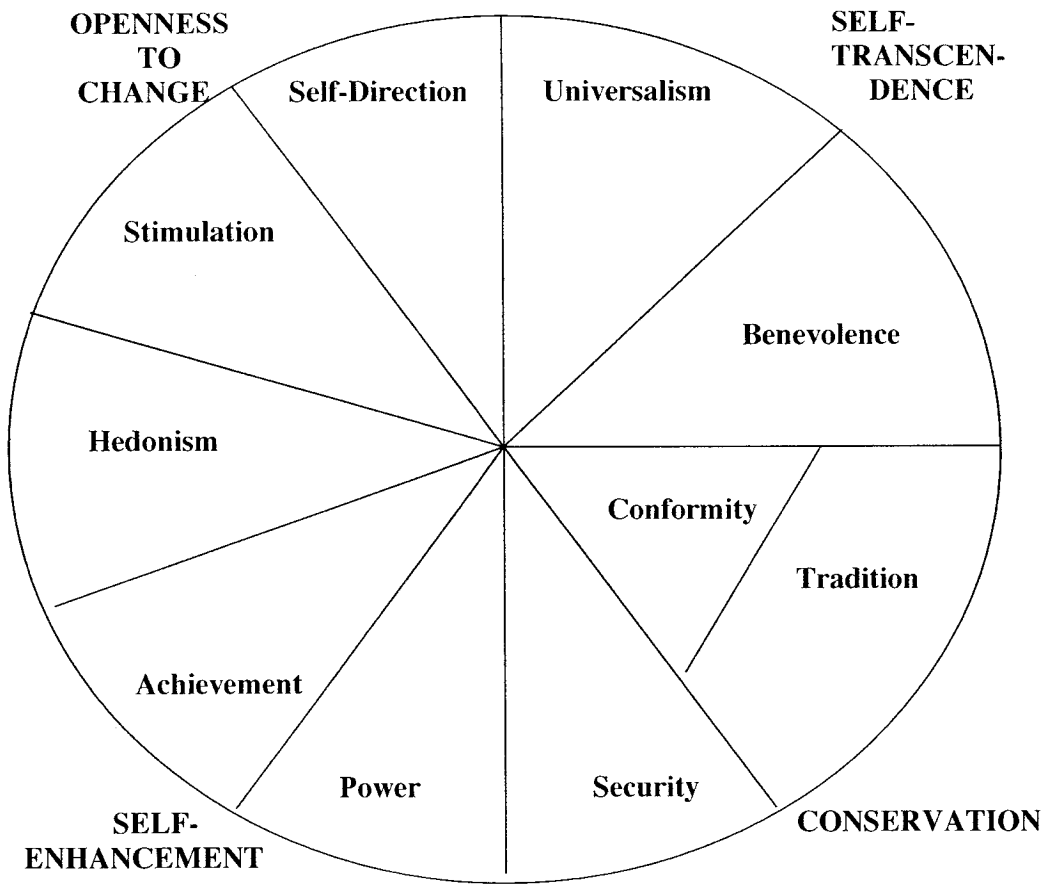
Figure 1. Theoretical model of relations among ten motivational types of values (Schwartz et al., 2001).

Table 2

Descriptive Statistics for and Correlations Between Current and Retrospective Personal

Value Ratings

	Current		Retropsective		
Variable	*M*	*SD*	*M*	*SD*	*r*
Self-Direction	4.99	.71	4.93	.79	.74*
Universalism	4.80	.75	4.66	.85	.81*
Benevolence	4.72	.74	4.63	.77	.74*
Security	4.43	.84	4.33	.90	.83*
Hedonism	4.41	1.09	4.12	1.27	.77*
Conformity	3.99	.97	4.13	1.00	.82*
Stimulation	3.62	1.10	3.72	1.16	.79*
Tradition	3.26	.96	3.23	.98	.88*
Achievement	3.22	1.06	3.83	1.24	.69*
Power	2.70	1.00	3.16	1.24	.75*

Note: *M* and *SD* based on raw scores; *r* based on scores transformed for skewness; * p < .0001

Table 3

Descriptive Statistics for Demographic, Goal Adjustment, and Subjective Well-Being

Variables

	M	SD
Demographics		
Age	59.18	5.19
Years of Education	14.87	2.48
Goal Adjustment		
Goal Disengagement	3.17	.84
Goal Re-engagment	3.91	.56
Subjective Well-Being		
Positive Affect	37.37	7.13
Negative Affect	15.33	6.03
Life Satisfaction	3.93	.64

Table 4

Correlations Between Current Value Ratings and All Other Variables (N=385)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1) Positive Affect [a]	1.0	-.24**	.39**	.16	-.13	.02	.05	.02	.27**	.27**	.34**	.30**	.19**	.16	.26**	.06	.11	.40**
2) Negative Affect		1.0	-.41**	.17	-.01	-.11	.03	.17	.02	.01	-.16	-.07	.05	.04	-.04	.08	-.30**	-.22**
3) Life Satisfaction [b]			1.0	-.06	-.12	-.05	.16	.03	.17	.12*	.07	.04	.08	.13	.25**	-.03	.20**	.25**
4) Sex				1.0	-.03	-.06	-.12	-.11	.17	.12*	.16	.05	.03	.13	.06	-.04	-.14	.06
5) Age [c]					1.0	.13	.04	.08	-.04	-.03	-.05	-.09	.02	.05	-.28**	-.03	-.10	-.10
6) Education						1.0	-.12	-.13	-.09	-.06	.08	-.07	.01	-.10	-.20**	.09	.00	.01
7) Conformity							1.0	.58**	.29**	.27**	-.10	-.10	.22**	.51**	.08	.11	-.01	-.01
8) Tradition								1.0	.31**	.20**	-.10	-.06	.11	.40**	-.01	.00	-.12	-.01
9) Benevolence [b]									1.0	.51**	.21*	.20**	.14	.24**	.16	-.05	-.01	.14
10) Universalism [b]										1.0	.35**	.20**	.07	.34**	.10	-.05	.03	.17
11) Self-Direction [b]											1.0	.44**	.28**	.11	.21**	.28**	-.03	.22**
12) Stimulation												1.0	.34**	-.06	.46**	.23**	-.05	.17
13) Achievement													1.0	.28**	.36**	.59**	-.18	.05
14) Security														1.0	.12	.15	-.09	.05
15) Hedonism [d]															1.0	.26**	.09	.13
16) Power [d]																1.0	-.14	-.03
17) Goal Disengage																	1.0	.35**
18) Goal Re-engage [a]																		1.0

[a] square root; [b] log; [c] inverse; [d] variable excluded from regression analyses; **$p < .0003$, two-tailed
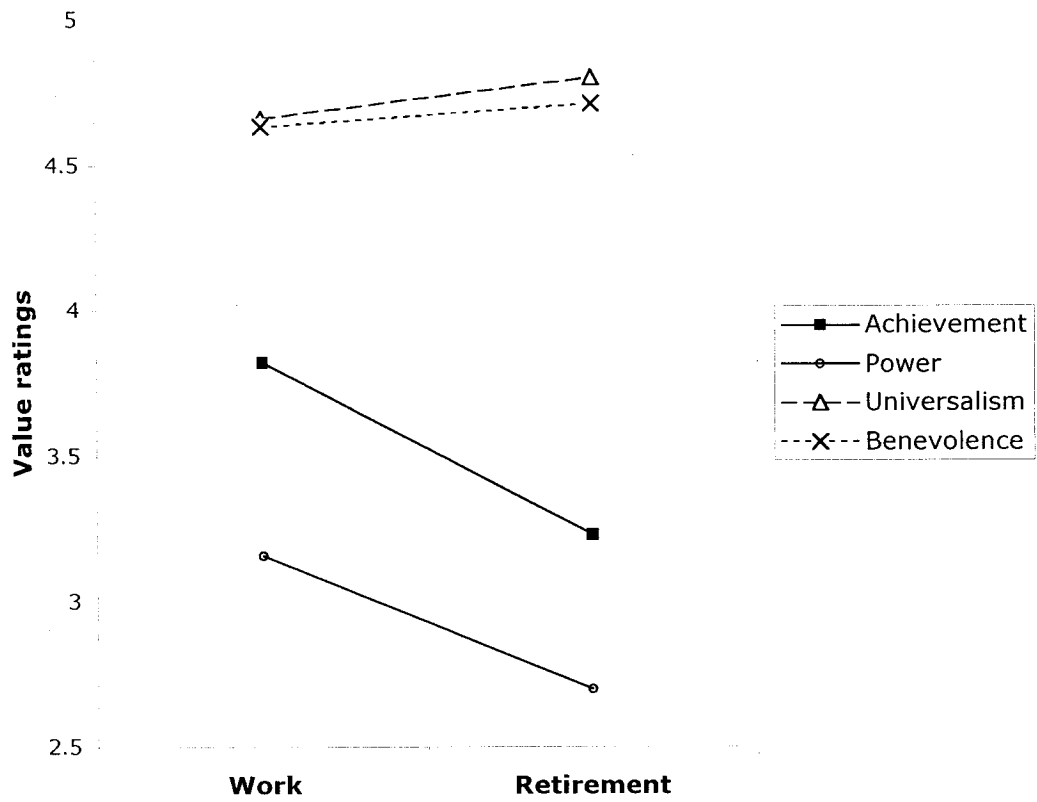
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Figure 2. Differences between retrospective (work) and current (retirement) value ratings. All slopes are significant, $p <. 001$.

Table 5.

Level 1 Results for Differences Between Retrospective and Current Value Ratings

Value		Coefficient	SE	t	df	p
AC	Intercept	3.82	.06	60.57	384	< .001
	Time Slope	-.59	.05	-12.72	384	< .001
PO	Intercept	3.16	.06	50.04	384	< .001
	Time Slope	-.46	.04	-11.01	384	< .001
UN	Intercept	4.66	.04	107.95	384	< .001
	Time Slope	.14	.03	5.32	384	< .001
BN	Intercept	4.63	.04	117.81	384	< .001
	Time Slope	.08	.03	3.06	384	.003

Note: AC = achievement; PO = power, UN = Universalism; BE = Benevolence

Table 6.

Level 1 Results for Estimation of Random Effects in Intercept and Slope of Values

Value		SD	df	χ^2	p
AC	Intercept	1.15	384	2623.30	< .001
	Time Slope	.63	384	727.08	< .001
PO	Intercept	1.09	384	1597.61	< .001
	Time Slope	.27	384	346.73	>.50
UN	Intercept	.77	384	2014.97	< .001
	Time Slope	.11	384	363.18	>.50
BE	Intercept	.63	384	925.85	< .001
	Time Slope	.04	384	223.84	>.50

Note: AC = achievement; PO = power, UN = Universalism; BE = Benevolence

Table 7.

Level 2 Results for Moderation of Achievement Intercept and Slope

	Coefficient	SE	t	df	p
Intercept	4.82	.97	4.96	379	< .001
Gender	-.02	.12	-.18	379	.86
Age	-.03	.01	-2.82	379	.006
Education	.05	.03	1.9	379	.058
GD	-.31	.08	-3.77	379	< .001
GR	.34	.12	2.86	379	.005
Time Slope	-1.68	.68	-2.47	379	.014
Gender	-.01	.09	-.06	379	.955
Age	.04	.01	4.08	379	< .001
Education	-.04	.02	-2.4	379	.017
GD	.03	.06	.48	379	.63
GR	-.11	.09	-1.16	379	.25

Note: GD = goal disengagement capacity; GR = goal re-engagement capacity

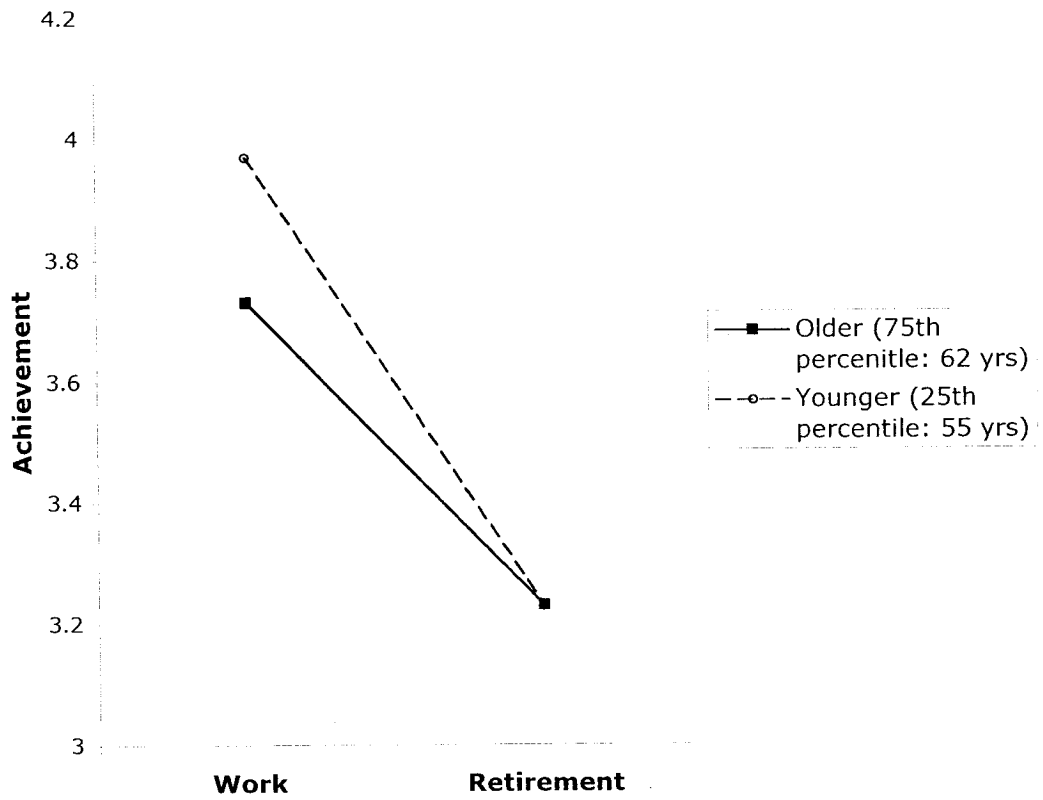*Figure 3.* Estimated achievement values as a function of age. Age was a significant

predictor of both intercept ($p < .006$) and slope ($p < .001$) of achievement scores.

Figure 4. Estimated achievement values as a function of education. Education predicted

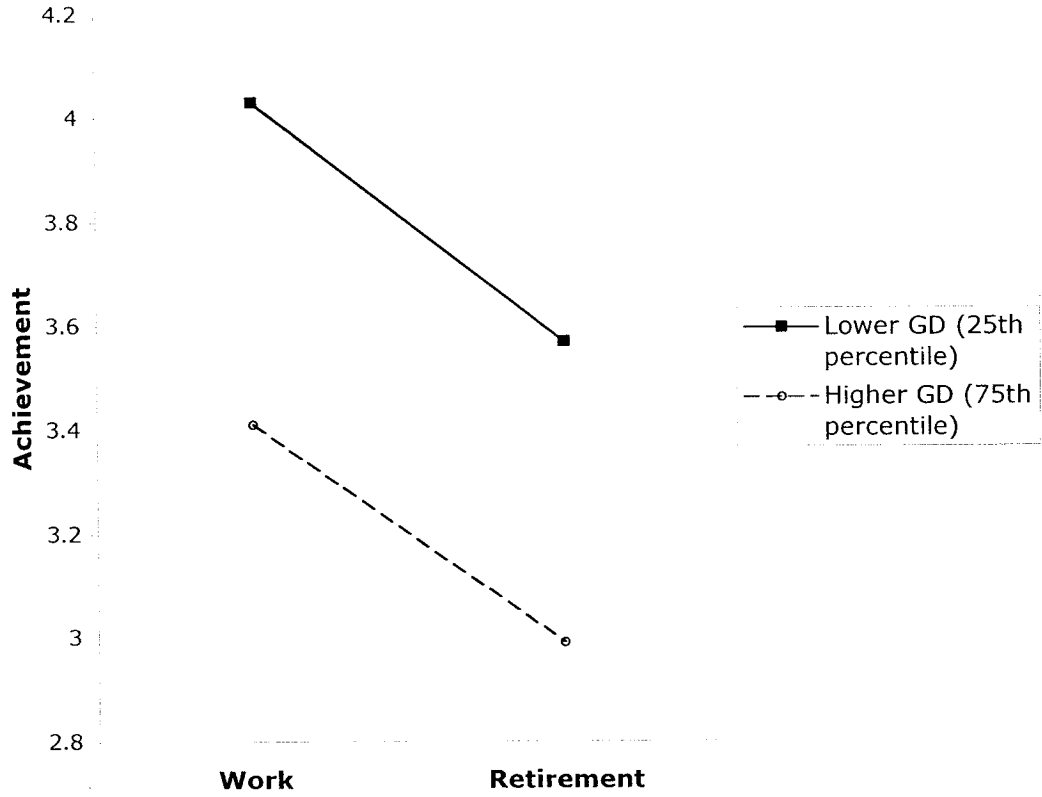slope (*p* < .02) but not intercept of achievement scores.

Figure 5. Estimated achievement values as a function of goal-disengagement capacity

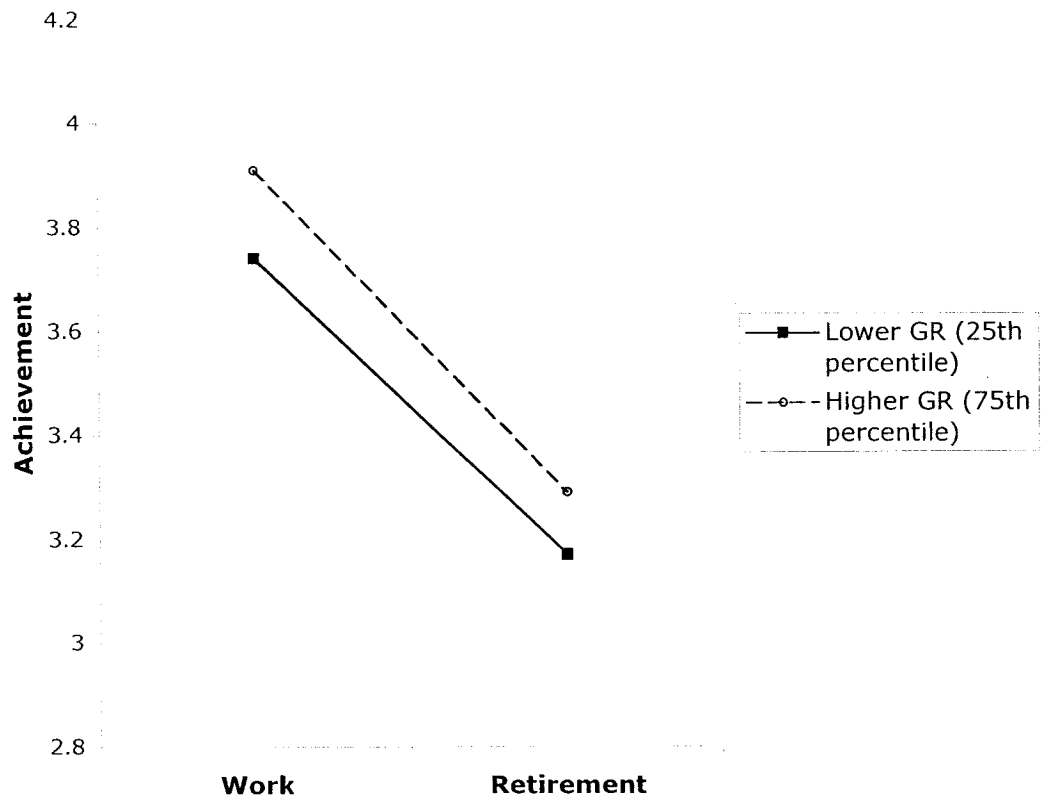(GD). GD predicted intercept ($p < .001$) but not slope of achievement scores.

Figure 6. Estimated achievement values as a function of goal-re-engagement capacity

(GR). GR predicted intercept ($p < .01$) but not slope of achievement scores.

Table 8.

Level 2 Results for Moderation of Power, Universalism, and Benevolence Intercepts

		Coefficient	SE	t	df	p
PO	Intercept	3.36	.72	4.63	381	< .001
	Gender	-.07	.10	-.72	381	.48
	Age	-.01	.01	-1.18	381	.24
	Education	.04	.02	2.11	381	.035
UN	Intercept	4.79	.51	9.34	381	< .001
	Gender	.17	.08	2.22	381	.027
	Age	-.004	.001	-.45	381	.66
	Education	-.01	.02	-.67	381	.50
BE	Intercept	5.0	.47	10.57	381	< .001
	Gender	.22	.07	3.14	381	.002
	Age	-.006	.01	-.85	381	.40
	Education	-.02	.02	-1.32	381	.19
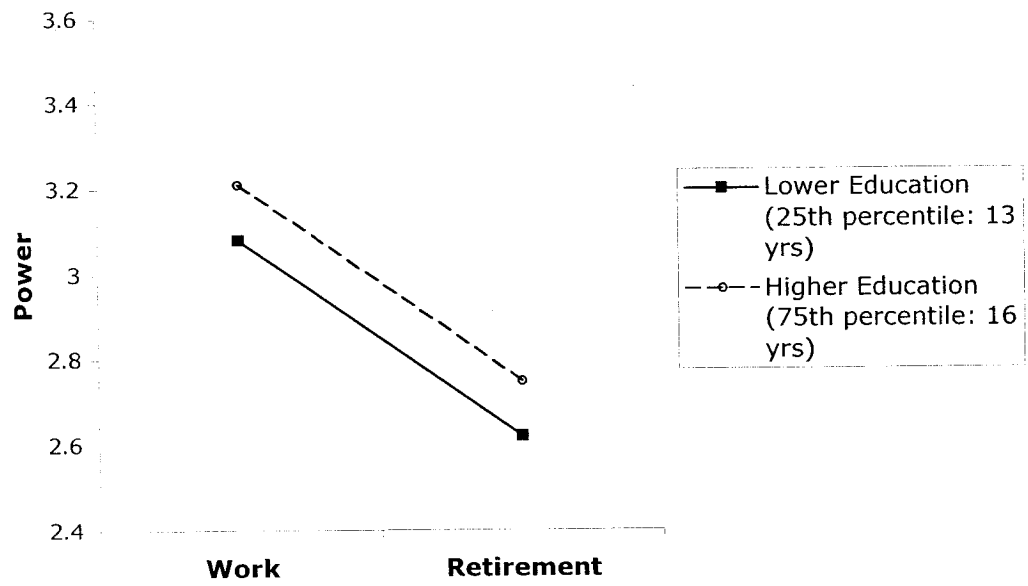
Figure 7. Estimated power values as a function of education. Education predicted the

intercept ($p < .04$) but not slope of power scores.
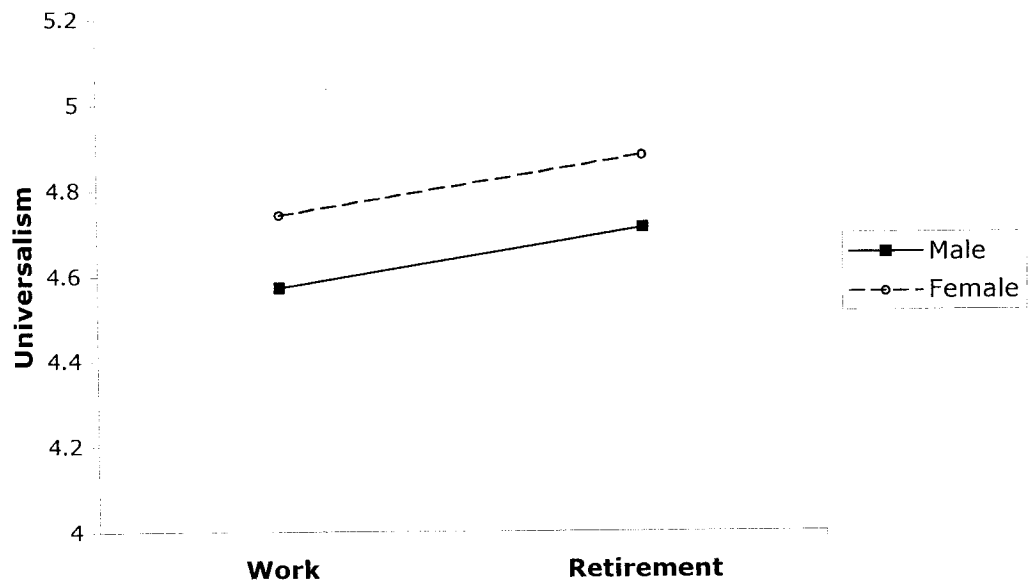
Figure 8. Estimated universalism values as a function of gender. Gender predicted

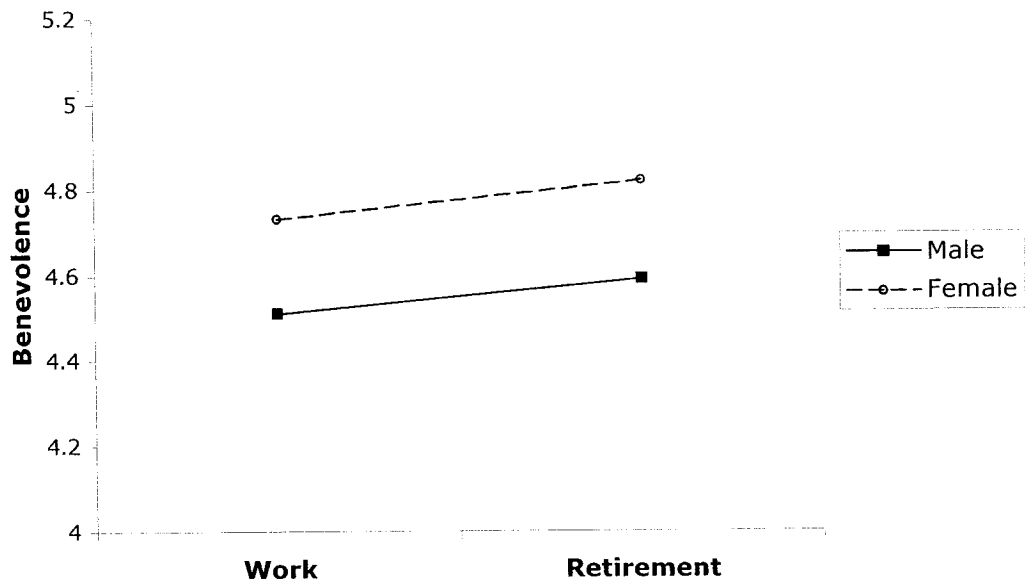intercept ($p < .027$) but not slope of universalism scores.

Figure 9. Estimated benevolence values as a function of gender. Gender predicted

intercept ($p < .002$) but not slope of benevolence scores.

Table 9.

Summary of Hierarchical Regression Analysis for Variables Predicting Positive Affect

Variable	B	SEB	β	ΔR^2
Step 1				*.04***
Gender	.31	.10	.16**	
Age	-91.36	35.60	-.13*	
Education	.02	.02	.04	
Step 2				*.17****
Gender	.15	.10	.07	
Age	-76.16	32.97	-.11*	
Education	.02	.02	.06	
Conformity	.00	.07	.00	
Tradition	.03	.06	-.03	
Benevolence	.96	.40	.14*	
Universalism	.45	.40	.07	
Self-Direction	1.07	.37	.17**	
Stimulation	.15	.05	.17**	
Achievement	.04	.05	.04	
Security	.12	.07	.10	

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

Table 10.

Summary of Hierarchical Regression Analysis for Variables Predicting Negative Affect

Variable	B	SEB	β	ΔR²
Step 1				*.04**
Gender	.01	.01	3.27***	
Age	.18	.75	.01	
Education	.00	.00	-.10*	
Step 2				*.09**
Gender	.01	.00	.22***	
Age	-.27	.73	-.02	
Education	.00	.00	-.08	
Conformity	.00	.00	-.13	
Tradition	.01	.00	.24***	
Benevolence	-.01	.01	-.06	
Universalism	.00	.01	.10	
Self-Direction	-.02	.01	-.21***	
Stimulation	.00	.00	-.05	
Achievement	.00	.00	.147**	
Security	.00	.00	-.07	

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

Table 11.

Summary of Hierarchical Regression Analysis for Variables Predicting Life Satisfaction

Variable	B	SEB	β	ΔR^2
Step 1				.02
Gender	-.02	.01	-.07	
Age	-10.53	4.68	-.12*	
Education	.00	.00	-.04	
Step 2				.06**
Gender	-.02	.01	-.11*	
Age	-9.96	4.6	-.11*	
Education	.00	.00	-.02	
Conformity	.02	.01	.14*	
Tradition	.02	.01	-.14*	
Benevolence	.15	.06	.16**	
Universalism	.01	.06	-.01	
Self-Direction	.03	.05	.04	
Stimulation	.00	.01	-.01	
Achievement	.00	.01	.01	
Security	.01	.01	.08	

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