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## Return to Work After Retirement: Contributing Factors and Health Implications

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A thesis submitted in partial fulfillment of the requirements for the Master of Arts degree in Sociology

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RETURN TO WORK AFTER RETIREMENT:  
CONTRIBUTING FACTORS AND HEALTH IMPLICATIONS

(Return to work after retirement)

(Thesis format: Monograph)

by

Jason Settels

Graduate Program in Sociology

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Master of Arts

The School of Graduate and Postdoctoral Studies  
Western University  
London, Ontario, Canada

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## **Abstract**

An issue of mounting importance in many industrialized nations, including Canada, is that of population aging. Because of fears that this trend could result in labour force shortages, many national governments and international organizations have encouraged policies aimed at prolonging the working life. This thesis builds on work that has been done to identify factors relevant to the likelihood of involvement in post-retirement work by examining how interactions among various demographic variables are associated with this likelihood. Furthermore, the present study investigates how post-retirement work is associated with three measures of health and well-being. As well as confirming results obtained by others, this study found significant interactions between gender and marital status, current age, and age at retirement that are associated with the likelihood of having been involved in post-retirement work. This thesis also revealed that post-retirement work is generally associated with higher levels of health and well-being. The theoretical and policy implications of this study's outcomes are discussed.

**Keywords:** activity theory, aging, bridge employment, continuity theory, disengagement theory, health, population aging, post-retirement work, retirement, well-being.

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# Chapter 1

## 1. Introduction

Population aging, caused by lower fertility rates and longer life expectancy, is a topic of increasing importance in many of the world's industrialized nations (Brown 2011; Cooke 2006; McDaniel and Rozanova 2011; McDonald and Donahue 2011; Statistics Canada 2006). Lower rates of fertility and mortality will also inevitably lead to rapid population aging in the developing world, where currently the median age is substantially lower than that of the developed world. In fact, the gap between the median ages of the developed and developing worlds is shrinking (Bongaarts 2004). In response to the concern that this potent demographic trend could lead to labour force shortages, national governments and some international organizations, including the OECD and the EU, have encouraged efforts to increase the rates of participation of older individuals in the labour force. Canada is among the nations that have made efforts to address the consequences of a rapidly aging population (Cooke 2006).

Statistics show the magnitude of population aging in Canada. Between 1981 and 2005, the proportion of Canada's population made up of those aged 65 years and older increased from 10 percent to 13 percent, and it is expected that population aging will accelerate over the course of the next three decades (Cooke 2006). While in 2011, those over 65 years of age comprised 14 percent of the Canadian population, it is expected that by 2036, seniors will comprise 25 percent of Canada's population (Statistics Canada 2012). The near future will involve massive numbers of people leaving the workforce as members of the baby boom generation, those born between 1946 and 1964, reach their retirement years (Brown 2011; McDonald and Donahue 2011; McMullin and Cooke 2004; Rix 2004). These demographic trends have led to concern among many policymakers and employers that the near future will be characterised by a shortage of skill and of business knowledge, and that the Canadian health and income safety nets will be compromised (Statistics Canada 2008). Some research suggests that this situation will be compounded by the fact that older workers are less productive than younger workers

because of differences by age in the adoption of new technologies, in health status, and in levels of effort while at work (Tang and MacLeod 2006).

One strategy that has been utilised in Canada to manage the rapidly aging population is the enactment of policy that encourages the immigration of young workers (Fougère et al. 2004). As immigrants to developed countries are of a lower average age than the resident populations, increased immigration is a means through which developed nations can counteract population aging (Bongaarts 2004). Fougère and his colleagues (2004:210) emphasise the importance of immigration in Canada:

In this respect, in comparison to other industrialized countries, Canada has one of the highest inflows of immigrants relative to its population. In fact, without the contribution of immigration, both the population and the labour force would eventually decline in the future.

They further emphasise that maintaining high rates of immigration could limit increase in the Canadian elderly dependency ratio, a measure of the number of elderly individuals in a population in relation to the number of individuals who are of working age.

Another strategy adopted in Canada to counter the ramifications of population aging is the encouragement of the labour force participation of older individuals. Statistics Canada's *A Portrait of Seniors in Canada* (2006:124) elaborates upon the need to keep older persons in paid employment:

With possible shortages in the labour market looming, policy makers and employers are searching for new ways to retain older workers on the job. Could older workers potentially be interested in staying longer in the workforce if certain choices were offered to them?

The 2008 *Expert Panel on Older Workers* emphasised the potential benefits to older workers and to the Canadian economy more broadly of policies and programs that will encourage and support the labour force participation of older individuals. It also promoted increased freedom for older individuals to determine their own labour force involvement and argued for the removal of obstacles and of disincentives that might prevent the engagement of older individuals in paid work (Denton and Spencer 2009).

Despite concerns that older workers may keep jobs from younger workers, numerous justifications have been offered for increasing workforce involvement in later life. Among them are the fact that life expectancy has increased, that lower levels of morbidity imply a healthier and more capable older labour force, that intergenerational equity requires that older individuals retire at a later age, and that prolonged labour force involvement is beneficial for the financial well-being of older individuals (McDonald and Donahue 2011). In fact, increased later life labour force involvement has been depicted as a positive trend that will help ensure that rising life expectancy will be paid for through employment instead of through financial transfers from younger generations to older generations (Ekerdt 2009).

In response to recent demographic and economic changes, new forms of retirement have developed, among them an emerging pattern of returning to work after one's first retirement (McDonald and Donahue 2011). This phenomenon is often referred to as "bridge employment." The meaning of this term is well-depicted by Pengcharoen and Shultz (2010) who refer to bridge employment as any part-time or full-time transitory employment pursued after having left one's career employment. It thus provides a transition stage between full-time employment and complete labour force exit (Dendinger, Adams, and Jacobson 2005; Pengcharoen and Shultz 2010). Throughout this thesis, this term will be used when reference is made to those who have engaged in paid work after a first retirement.

The importance of the topic of work in later life has led some researchers to investigate the factors associated with whether an older individual will return to the labour force after his or her retirement. Some research has found a positive relationship between measures of social status and involvement in post-retirement work (Cahill, Giandrea, and Quinn 2006; Griffin and Hesketh 2008; Lefebvre, Merrigan, and Michaud 2011; Maestas 2010; Raymo et al. 2010; Statistics Canada 2006). Other studies have shown that those of younger age and those who have retired at a younger age are more likely to engage in paid work after their retirement (Cahill et al. 2006; Davis 2003; Griffin and Hesketh 2008; Lefebvre et al. 2011; Maestas 2010; Statistics Canada 2006). Many studies have linked being a man with involvement in post-retirement work (Davis

2003; Griffin and Hesketh 2008; Lefebvre et al. 2011; Maestas 2010). Regarding marital status, studies have not found a substantial difference between the married and the unmarried in rates of paid work after retirement (Davis 2003; Lefebvre et al. 2011).

This thesis will build on past research through a secondary analysis of data accumulated in Statistics Canada's *General Social Survey (2007), Cycle 21: Family, Social Support and Retirement (GSS-21)*. New knowledge will be developed by simultaneously studying how a diverse set of six demographic variables, as well as how a number of interactions among them are associated with the likelihood that one has engaged in paid work after a first retirement. This study concurs with Cooke's (2006) emphasis on the need for policy promoting work in later life to consider a life course approach that acknowledges how events earlier in life impact later life circumstances, as well as how multiple life domains, including those of education, work, family, and health, interact in influencing the decisions people make. It seeks to develop knowledge concordant with a life course approach that can aid in the formulation of policy that can effectively prolong the working lives of Canadian citizens.

A related topic is that there may be benefits of continued work activity for older individuals. Past studies have produced some conflicting results concerning whether older persons benefit by remaining involved in formal activities. The present study will advance our understanding of this issue by measuring how paid work after retirement is associated with three measures of health and well-being. Furthermore, this study will assess how return to work after retirement interacts with current age and with age at first retirement in relation to levels of health and well-being.

The two research questions guiding this study are:

- 1) What factors are associated with the likelihood that a retired individual has engaged in paid work after first retirement?
- 2) How is post-retirement work associated with the levels of health and well-being of older individuals?

By providing insights into these questions, this study will inform our understanding of work in later life and will help in establishing whether later life work is to the benefit or

to the detriment of the quality of life of older individuals. In addressing the issue of population aging, both questions must be answered; it would be socially unjust to retain older persons in the workforce for the benefit of the economy if this retention is to the ultimate detriment of their own quality of life.

This thesis is divided into two sections, each one pertaining to one of the above two research questions. The majority of the statistical analysis will be based in multivariate logistic regressions. It is expected that the investigation of the first research question will produce valuable results concerning which people are more likely to become involved in bridge employment. It is expected that return to work after retirement will be significantly and positively associated with all three of the health/well-being outcomes used in the investigation of the second research question, and that these positive associations will be somewhat attenuated among those of higher current age, and among those of higher age at retirement.

Beyond these pragmatic benefits, the present study will contribute to the debate between the activity and disengagement theories of aging. In brief, the activity theory of aging proposes that older individuals who remain socially engaged and active will experience higher levels of health and well-being (Connidis and Willson 2011; Lemon, Bengtson, and Peterson 1972; Longino and Kart 1982; McPherson 1990; Moody 2010; Turner 1989), while the disengagement theory of aging argues that due to the inevitable physical and mental declines that accompany advancing age, it is functional for both older individuals and for the larger society that older persons gradually recede from active involvement in the community (Achenbaum and Bengtson 1994; Connidis and Willson 2011; Cumming et al. 1960; Cumming and Henry 1961; Maddox 1963; McPherson 1990; Moody 2010; Turner 1989). While examination of the first research question will produce knowledge concerning which older individuals are inclined to partake of the activities of the labour force, investigation of the second research question will contribute to our understanding of the extent to which these activities are to the benefit or to the detriment of the quality of life of the older persons themselves.

In the next chapter, I will present a review of the literature addressing numerous topics of importance to the issue of return to work after retirement, including various

theories of aging, mental capabilities in the later years, and factors that have been found to be associated with post-retirement paid work. In Chapter 3, I will explain the data set and the methodology employed in this thesis. This chapter will include details concerning sampling, the variables examined, and the statistical tests employed. In Chapter 4, I will present the descriptive and inferential statistical results obtained in the present study. Chapter 5 will involve an interpretation of the outcomes presented in Chapter 4 and a discussion of their significance.

## Chapter 2

### 2. Review of the Literature

#### 2.1. Introduction

This chapter will provide a background to and a context for the investigation of the topic of bridge employment, which is of key importance in the present-day industrialized world that is facing a rapidly aging population and concomitant labour force shortages, through a review of relevant literature.

Discussions of efforts aimed at increasing the labour force participation of older adults must acknowledge that the norms surrounding age are socially constructed (Gubrium and Holstein 1999; Hendricks and Achenbaum 1999; McMullin 2010; Turner 1989). McMullin (2010) links the social construction of societal conceptions of age with the age stratification theory of aging when she claims that the way in which the meanings of age are constructed in any society will determine the norms concerning the ages at which different roles are adopted or abandoned. In this sense, policy efforts to encourage work in the later years are attempts to socially reconstruct the meaning of age in a manner that will be beneficial within the contemporary context. Some scholars have argued that the increasing value placed on productive work and work ethic that has accompanied modernization is linked to the reduction of the status of the elderly (Cowgill 1974). Thus, from this perspective, finding effective ways to keep older adults in productive work will raise the levels of status they enjoy.

This review of the literature will begin by addressing three theories of aging that are highly pertinent to the topic of return to work after retirement: disengagement theory, activity theory, and continuity theory. Some policy implications of these theories will be explored. A short discussion will then follow regarding the physical and intellectual capacities of older individuals. Finally, this literature review will consider the social importance of bridge employment as well as factors that are related to post-retirement engagement in work activity.



## **2.2. Theoretical Insights Relating to Productivity and Aging**

For the most part, the continuity, activity, and disengagement theories of aging each elaborate upon a different dimension of the phenomenon of growing older. However, these theories are also composed of ideas that stand in opposition to one another. This opposition is largely based on the fact that these theories of aging hold elements of prescription beyond description and explanation. For instance, proponents of disengagement theory view old age as a time during which elderly individuals gradually recede from active involvement in the surrounding community (Achenbaum and Bengtson 1994; Connidis and Willson 2011; Cumming et al. 1960; Cumming and Henry 1961; Maddox 1963; McPherson 1990; Moody 2010; Turner 1989). This disengagement is seen as a natural process that is functional for both the elderly individual and the larger society (Cumming et al. 1960). Turner (1989:597) provides a succinct statement of disengagement theory when he claims:

In so-called disengagement theories, it is argued that with ageing people begin to relinquish certain social responsibilities and expectations in order to engage more fully in personally rewarding leisure activities. As the elderly withdraw from social roles, society as it were disengages from the ageing in order to bring about a neutral process of declining reciprocity.

The activity theory of aging is considered the opposite of that of disengagement (Connidis and Willson 2011; Moody 2010; Turner 1989). Proponents of this theory argue that the more active and involved elderly people are, the more satisfying their lives will be (Connidis and Willson 2011; Lemon et al. 1972; Longino and Kart 1982; McPherson 1990; Moody 2010; Turner 1989). As elderly individuals are likely to maintain the values and needs of their earlier years, they are likely to proceed with the social roles and activities of their past (Lemon et al. 1972). Turner (1989) suggests that post-retirement experiences tend to be related to one's previous style of life and social standing. These latter points tie activity theory with a similar perspective on aging known as continuity theory, which proposes that successful aging occurs when elderly individuals maintain a lifestyle similar to that of their earlier years (Atchley 1989; McPherson 1990; Moody 2010).

### 2.2.1. The Disengagement Theory of Aging

The disengagement theory of aging was first explicitly formulated by Elaine Cumming and her colleagues in 1960, and then elaborated by Cumming and Henry in 1961. Cumming and Henry's disengagement theory, proposed in *Growing Old* (1961), was the first attempt made by gerontologists to develop a multidisciplinary and explicit theory of normal aging, as opposed to aging characterised by senescence and gradual decline (Achenbaum and Bengtson 1994). In 1960, Cumming and her colleagues suggested that elderly individuals cooperate with their surrounding community in a gradual process of mutual separation, or disengagement. They traced this idea back to Durkheim, who in *Suicide* (1897/1951:215) stated that,

Society is still lacking in [the child], for it has not had the time to form him in its image; it begins to retreat from the latter [aged at the last confines of life] or, what amounts to the same thing, he retreats from it. (bracketed text added by Cumming et al. 1960:25)

Cumming and Henry (1961) argued that as many of the connections between elderly individuals and their social surroundings are severed, those that remain undergo a change of quality. Social relationships, for example, become more horizontal and egalitarian rather than vertical and based on differences in power (Cumming and Henry 1961).

The disengagement theory of aging is also derived, at least in part, from Talcott Parson's functionalist ideas of social adjustment. Elderly individuals benefit from this separation because their loss of skill, knowledge, and energy with advancing age make it impractical for them to remain highly productive and engaged with their social surroundings. Disengagement of the elderly is also of benefit for society because it frees up positions in paid work and in other domains for the entry of young individuals, thereby ensuring that young individuals undergo the training they will need to eventually take up positions of authority while also ensuring that the elderly are disengaged before they undergo the loss of skill that will compromise their performance in important social roles (Achenbaum and Bengtson 1994). Disengagement theory is functionalist also because, according to this standpoint, the disengagement of the elderly from society safeguards against their deaths causing disruptions to the larger social system (McPherson 1990). This theory of aging is related to modernization theory because it

holds that the status of the elderly, by necessity, must decline with the increasing efficiency of society that accompanies its modernization. This makes the disengagement of the elderly a natural process (Moody 2010).

Since the initial studies from which it developed and since its first explicit formulation, the disengagement theory of aging has been a topic of controversy, on both the empirical and theoretical levels. Cumming and Henry (1961) developed their theory from a 10-year longitudinal study of later life aging known as the Kansas City Studies of Adult Life. Disengagement theory was developed as an explanation for the findings of this study (Cumming and Henry 1961). Some of the researchers involved found that with age, individuals develop an increasing *interiority* in which they focus more and more on their own inner psychology. They saw elderly individuals as becoming increasingly detached from their social environment with the passage of time in anticipation of the role losses that will accompany their advancing age (Moody 2010). Cumming and her colleagues (1960) studied a total of 211 people, a portion of who were between the ages of 50 and 70 years and were a part of the Kansas City studies, and the remainder of whom comprised a sample of mobile elderly individuals aged 70 to 90 years. They found their sample of older individuals to be somewhat eccentric, carefree, and egocentric. They attributed these traits to a decreased level of social control born of the gradual disengagement of this sample of older individuals from the larger society.

Some research provides limited support for Cumming and Henry's (1961) idea that elderly individuals experience constraints on the activities in which they have the opportunity and motivation to take part and on the roles that the surrounding social structure permits them to adopt. Maddox (1963) accumulated empirical evidence that showed that some elderly subjects are able to maintain high levels of morale even in the absence of high levels of activity and of interpersonal contact. He speculated, in accordance with Cumming and Henry (1961), that psychological disengagement is an anticipatory coping strategy that allows elderly persons to neutralize the demoralizing impact of the structural disengagement that will accompany their advancing age. He further suggested that with advancing age, social activity is less likely to be associated with high levels of morale because decreased social engagement results in fewer critical

evaluations and sanctions on the part of others that are distressing for aging individuals. Although Maddox (1963) found a general positive association between activity and morale, he used these suggestions to argue that this positive relationship is not inevitable. Tallmer and Kutner (1969) found patterns of disengagement in their sample of older individuals in the U.S. that they attributed to the significant physical and social stressors that accompany old age and that dramatically impact the lifestyles of older individuals.

Despite this empirical support, many criticisms of both a theoretical and empirical nature have been made of disengagement theory. Other empirical work conducted in the U.S. has shown that withdrawal is not the usual pattern (McPherson 1990). Furthermore, disengagement is a heterogeneous phenomenon, as people in different social circumstances show disengagement to differing degrees (McPherson 1990). These criticisms point to what is probably the main argument against disengagement theory: it falsely assumes the universality of increasing disengagement with advancing aging (Connidis and Willson 2011; McPherson 1990). This assumption is made despite the fact that the elderly form the age group that is the most likely to be heterogeneous because they have had the longest time available to accumulate unique sets of experiences (Connidis and Willson 2011). McMullin (2000, 2010) emphasises that class, age, gender, and race/ethnicity form interlocking structures, the effects of any one of which cannot be understood without examining them all as an interactive whole. Any difference between two individuals in any one of these structures will lead them down different life trajectories (McMullin 2000, 2010). The older the two individuals are, the more lifetime they will have undergone over the course of which their life trajectories will have continued to diverge. As such, greater heterogeneity among the elderly is an outcome of the interplay of social structural forces.

Disengagement theory has been criticized from a number of additional angles. Connidis and Willson claim that some have criticized this theory for “effectively putting older people on the shelf for the benefit of society’s smooth functioning” (2011:206). Others have noted that there is some ambiguity concerning the behaviour that falls under the label of “disengagement.” An individual might withdraw from one set of activities only to be able to invest more time and effort in another set of activities (Moody 2010).

Cumming and Henry (1961) themselves argued that elderly individuals will undergo a crisis if they do not find a new set of roles, congruent with the disengaged state, to replace the roles that have been abandoned. Cumming and Henry's (1961) analysis has been criticized for being cross-sectional instead of longitudinal and for being based on a sample whose representativeness of the larger elderly population of the U.S. could be questioned (Maddox 1963). Also among the arguments used to contradict disengagement theory is the claim that retirement generally leads to a period of poverty and decline in social status for elderly individuals, instead of being a stress-free "golden age" of ample time to become involved in a range of enjoyable leisure activities. Studies conducted in the U.S. show that disengagement in old age usually occurs because of illness rather than being a natural outcome of the natural process of aging (Turner 1989).

Achenbaum and Bengtson (1994) discuss numerous criticisms that have been made of disengagement theory based on a number of criteria that are often used in the evaluation of scientific theories. Some have criticized the logical adequacy of the theory by claiming that it is too functionalistic or too one-dimensional in certain regards. Concerning the operational adequacy of the theory, it has been claimed that the outcome variable, successful aging, cannot be subjected to empirical testing. Some have argued that this outcome is more a matter of personal values than it is an objective outcome that can be operationally defined. Concerning the criterion of empirical adequacy, disengagement theory has been criticized at its source as other members of the Kansas City studies research team, including Neugarten and her associates (1964), were not generally led to the same conclusions as those arrived at by Cumming and Henry. Further empirical investigations subsequent to the Kansas City studies also failed to show a universal pattern of disengagement with the progress of age in later life. With regards to the criterion of pragmatic adequacy, this theory contradicts the efforts of social workers and of administrators who strive to keep the elderly active and engaged in life (Achenbaum and Bengtson 1994). Social workers have promoted the physical activity of their older clients because such activity can help them feel good and maintain a high quality of life. Some have even argued that physical activity on the part of the elderly has the potential to save the health care system a substantial amount of expense (Marshall and Altpeter 2005).

### 2.2.2. The Activity and Continuity Theories of Aging

North American scholarship that promotes the idea that successful aging is best accomplished by remaining active (perhaps at a slower pace) can be traced back to Havighurst and Albrecht in *Older People* (1953/1980). Their study of a sample of older individuals in the U.S. found that those elderly individuals who are more active have higher levels of well-being and of positive adjustment to old age. They emphasised that work has many meanings beyond that of earning a living, claiming that it can serve as a means for the achievement of self-worth, as a source of opportunities for social interaction, and as an outlet for creative expression. They used these ideas to argue for the intrinsic importance of work activity for those elderly individuals who are still capable of productive labour.

These ideas have been elaborated upon by other scholars. Burgess (1960), for example, argued that it is best for elderly individuals to replace lost roles and activities with new ones in order to maintain a healthy self-concept and a high degree of life satisfaction. Many others have commented on this idea that elderly individuals should either re-engage in the roles and activities of their past or become involved in new ones (Connidis and Willson 2011; Lemon et al. 1972; Longino and Kart 1982; McPherson 1990; Moody 2010; Turner 1989). Hence, activity theory provides a strong counter to the opinions on aging expressed through disengagement theory. Continuity theory is similar to activity theory because in continuity theory, elderly individuals are seen as striving to maintain as much of their earlier identities, activities, and style of life as they could (Atchley 1989; McPherson 1990; Moody 2010). Both theories argue that lower levels of activity in old age are more often the result of health problems and of disabilities than they are the outcome of a functionally beneficial process in which society separates the elderly from their earlier social roles (Moody 2010). Proponents of activity theory focus their attention on the benefits of continued social role involvement for elderly individuals themselves. It might be the case, however, that while this is beneficial for many elderly persons, it is not of benefit to society as a whole. The earlier discussion of the societal benefits of disengagement among the elderly presents numerous reasons why the societal benefit of activity among the aged can be questioned.

Until the 1970s, the activity theory of aging had been only implicitly acknowledged in the gerontological literature, despite its importance to this literature (Lemon et al. 1972). In 1972, Lemon and his colleagues sought to formally and explicitly state this theory of aging. They associated activity with life satisfaction and role loss with life dissatisfaction (Lemon et al. 1972). Some of the central tenets of activity theory show it to be based in symbolic interactionist thought. Self-concept is seen as intervening between activity and levels of life satisfaction (Lemon et al. 1972; Longino and Kart 1982). Lemon and his colleagues (1972:515) expressed the interactionist leanings of activity theory when they wrote,

Activity provides various role-supports necessary for reaffirming one's self-concept. The more intimate and the more frequent the activity, the more reinforcing and the more specific will be the role supports. Role supports are necessary for the maintenance of a positive self-concept which in turn is associated with high life satisfaction.

Activity theory can thereby be contrasted with disengagement theory because the former is grounded in symbolic interactionism, whereas the latter is based in functionalism.

Much research has been conducted that has examined how activity impacts life satisfaction among older persons. One study finds that continued learning, work, and participation in the larger society are among the factors associated with well-being among the elderly (Statistics Canada 2006). Maddox (1963) studied activity and morale in a sample of 182 non-institutionalized individuals aged 60 years and older. He found reported levels of activity to be positively correlated with morale. He further discovered that changes in levels of activity are related to changes in morale in the expected direction. In their formal statement of activity theory in 1972, Lemon and his colleagues studied a sample of 411 subjects who were potential in-movers to a retirement community located in Southern California. They found that within this sample, only informal activity with friends had a significant positive impact on satisfaction with one's own life. Informal activity with neighbours and family, involvement in formal organizations, and solitary activity were unrelated to life satisfaction (Lemon et al. 1972). They claimed that the positive relationship between informal activity with friends and life satisfaction was of a low level of substantive significance. Longino and Kart (1982)

replicated this study with a sample of 1,209 elderly subjects from three very different retirement communities. They found that informal activity is strongly and positively associated with life satisfaction. Solitary activity was found to have no significant effect on life satisfaction, while formal activity was found to negatively impact this outcome (Longino and Kart 1982).

Both Lemon and his colleagues (1972) and Longino and Kart (1982) adopted a very symbolic interactionist perspective when they argued that activity leads to higher life satisfaction among older individuals through the medium of responses from others in social interaction that support and confirm the role-identities that constitute older individuals' self-concept. Lemon and his colleagues (1972) suggested that informal activities, especially those with friends with whom relationships are more voluntary, tend to involve primary relationships marked by intimacy and therefore by the exchange of specific and potent confirmations of role-identities. Formal activities, on the other hand, tend to involve secondary relationships marked by less intimacy and therefore characterised by interactions that are less potent in role-identity confirmation because they provide supports only for more general social roles and personal identities (Lemon et al. 1972). Lemon and his colleagues (1972) suggested that informal activity with relatives and neighbours, formal activity, and solitary activity might not provide enough support for role-identities to lead to benefits in life satisfaction. Longino and Kart (1982), who agree with many of Lemon and his colleagues' (1972) ideas, conducted a replication of their work with methodological improvements, and suggested that formal activity can be detrimental to the happiness of older persons. Formal activities can place older individuals in institutional hierarchies within which the limits on their functionality can hold them in low positions and can expose them to negative and damaging role supports (Longino and Kart 1982).

Other scholars have studied the importance of activity for health among older individuals. Young and Glasgow (1998) argue for the health benefits of formal social participation. They found that involvement in service clubs and in other community-based groups has positive effects on health net of those effects attributable to the social opportunities provided by membership in these groups. They conclude that while



informal social support is depicted in the literature as providing protection against the effects of difficult circumstances, formal organization participation provides a direct causal benefit to health (Young and Glasgow 1998). Another study investigated subsequent mortality in rural elderly individuals who were interviewed about their social ties in 1982 and in 1985. The researchers found that the report of high levels of social ties at both interviews, as well as the report of an increase in social ties from low levels in the first interview to high levels in the second, were associated with a lower risk of subsequent mortality (Cerhan and Wallace 1997). A study by Luoh and Herzog (2002) concludes that elderly individuals who perform more than 100 hours of volunteer or paid work annually are substantially protected against health problems and risk of mortality. They found that volunteer and paid work in later life have an additive benefit for health, and they postulate that this outcome might be related to the positive self-esteem concomitant to the knowledge that one is active, competent, and making significant contributions to one's community.

The inconsistencies between these studies are likely due to the differences in the samples examined, in the methodologies employed, and in the variables investigated. What is clear is that a positive self-concept is central to life satisfaction and that activities that support a positive self-concept are therefore highly beneficial for the health and well-being of older individuals.

Of relevance to the topic of activity theory, control over one's own life is of central importance in discussions of social patterns of psychological distress. Employment is generally beneficial in averting psychological distress, mainly due to the control it grants workers over their own circumstances (Mirowsky and Ross 2003). The status of retiree, for example, has been associated with lower levels of personal control and with the feeling that one lacks personal agency. This association constitutes one reason why levels of personal control have been found to be lowest among the oldest age groups (Schieman 2001). With relevance to the topic of retirement policy, what seems to matter most for the well-being of older individuals is not whether they gradually retire, but rather, whether they have the freedom to make their own decisions concerning their retirement transition (Calvo, Haverstick, and Sass 2009). This idea highlights the

importance of self-determination to psychological well-being. Research has shown that jobs characterised by self-direction and complexity lead to the development of a personality marked by agency and self-determination. Conversely, oppressive jobs that involve little self-direction cause increased levels of psychological distress (Kohn and Schooler 1982). In accordance with this research, Mirowsky and Ross (2003) list dependency as one of the conditions that impedes the development of a sense of control over one's own circumstances and outcomes. These ideas implicitly support activity theory. They suggest that through employment, older individuals gain greater control over their own lives, and that they thereby become less dependent upon the support of their social network and of the surrounding societal system. Older individuals can thereby maintain emotional health and avoid psychological distress. Schieman (2001) suggests that older individuals exercising greater control over their own lives may be more likely to age successfully.

Despite the promise that activity theory holds, it has also received a diverse set of criticisms. Just as is the case with disengagement theory, activity theory is to be criticized for homogenizing the elderly population. It assumes the generalizability of what might only be beneficial for certain elderly individuals (Connidis and Willson 2011). Also, little effort has been made to examine the quality of the substitute activity and the subjective meaning that it holds for the elderly actor. An activity that holds little meaning and emotional significance for an elderly individual will not likely be able to aid him or her in adjusting to old age. Activity theory has also been criticized for the ambiguity of causal direction that it involves. It might be the case that the more satisfied elderly individuals are, the more active they will be because of the high spirits and energy levels that are concomitant to high levels of life satisfaction (McPherson 1990).

Unlike disengagement and activity theories, continuity theory's main postulate is that there is continuity of experiences and behaviours into later life, so that some may be more active and others more disengaged based on their level of activity prior to later life. According to this perspective, individuals adapt to old age by maintaining a certain degree of consistency with their earlier lives in their lifestyle, in their social roles, and in the activities in which they are involved (McPherson 1990). Continuity theory proposes a

process of evolution with advancing age; change does occur, however, it is based on an individual's past and occurs within the context of a basic structure that is stable through time (Atchley 1989). Staying true to this basic structure is what allows elderly individuals to successfully adjust to the changes that accompany normal aging (Atchley 1971). The identity continuity displayed by individuals who retain their earlier work identities in retirement is seen as the outcome of a successful effort to maintain inner psychological continuity (Atchley 1989). As continuity holds much adaptive value for elderly persons, people should plan for their later years in a manner that is attentive to the lifestyle they established earlier in their lives (McPherson 1990). The following quotation from William James (1890/1950:121) is an eloquent statement of the continuity that characterises human life:

Already at the age of 25 you see the professional mannerism settling down on the young commercial traveller, on the young doctor, on the young minister, on the young counsellor at law. You see the little lines of cleavage running through the character, the tricks of thought, the prejudices, the ways of the shop in a word, from which the man can by and by no more escape than his coat sleeve can suddenly fall into a new set of folds. On the whole it is best he should not escape. It is well for the world that in most of us, by the age of 30, the character has set like plaster, and will never soften again.

Some scholars have made direct connections between continuity theory and patterns of work and retirement. Ulrich and Brott (2005), for example, find support for continuity theory in their study of older American workers and bridge employment. They claim that older workers seek bridge employment in jobs that are similar to the jobs of their past, desire to maintain the occupational identities they held throughout their early and midlife careers, and are motivated to keep using the skills they used at earlier points in time. They further explain that older workers are well-aware of their strengths and shortcomings, and that these self-evaluations are utilized as decisions are made concerning later life work. Davis (2003) and Dendinger and her colleagues (2005) add that continuity theory suggests that bridge employment provides continuity for individuals for whom career was a main source of identity. Furthermore, this employment helps to mitigate the psychologically stressful feeling of rolelessness that can accompany withdrawal from one's previous employment (Davis 2003; Dendinger et al. 2005). Latif

(2011) explains that continuity theory predicts psychological well-being in retirement. Individuals occupy numerous roles throughout their lives, and retirement allows for greater engagement in life roles other than that of work, such as those involved in friendships and family relations (Latif 2011). In accordance with this prediction, Latif (2011) finds that retirement has a significant positive effect on psychological health.

Lieberman and Tobin (1983) performed a series of studies with institutionalized elderly individuals that show the extent to which continuity with one's previous life in the face of the drastic change in life space caused by institutionalization is beneficial for psychological health. Those elderly individuals who were placed in settings that were dramatically different from the settings to which they were accustomed and that therefore demanded lifestyles and behavioural patterns that widely diverged from those of their earlier lives were under heavy amounts of stress (Lieberman and Tobin 1983). Lieberman and Tobin (1983) studied the means by which elderly persons maintain the coherent identities of their past even in the face of radical life changes that threaten the consistency of these self-images. They found that the elderly persons they examined displayed a remarkable ability to maintain their earlier self-images even under institutionalization and closeness to death. While their self-images remained stable, those elderly participants who were under stress showed increased fluctuation with the passage of time in the strategies they used to achieve this stability (Lieberman and Tobin 1983). Lieberman and Tobin (1983) observed that those elderly individuals who did not make enough use of the more effective strategies had more precarious identities and were likely to show long-term deficiencies in their adaptation to old age and to their present circumstances.

As is the case with activity theory and disengagement theory, continuity theory has been criticized from numerous angles. One criticism is that it neglects to consider the constraints on the individual that are imposed by the social environment. Continuity can only be achieved if it is permitted by the interaction between the environment and the elderly individual's characteristics. For example, policies of mandatory retirement threaten elderly individuals' ability to maintain occupational continuity (McPherson 1990). As applied to career identity, continuity theory has been criticized by those who have argued that career identities tend to be marked by discontinuities and sudden

transitions (Howie, Coulter, and Feldman 2004). This theory has also been criticized by those claiming that continuity can be a maladaptive strategy if it leads older individuals to maintain behavioural patterns and to adhere to principles that have become outmoded (McPherson 1990). The central criticism of continuity theory is that it assumes that some aspects of life are constant. Scholars have suggested that after retirement, significant changes in objective circumstances and in psychological condition are common (LaBauve and Robinson 1999).

The present study considers disengagement theory, activity theory, and continuity theory in relation to work activity after retirement. It engages the continuity theory of aging because it acknowledges that features of individuals' past will influence work activity in later life as individuals seek to establish a style of life in retirement that holds continuity with their past. It also connects with the disengagement and activity theories of aging by identifying factors that are associated with continued activity through involvement in paid work after retirement versus disengagement from paid work through a one-step complete labour force exit. The above structural analysis of heterogeneity among the aged is of relevance to discussion of disengagement theory as this heterogeneity leads to the prediction that older individuals will differ in the starting time and pace of their disengagement. The present study will directly test some of the claims of activity theory by assessing how return to work after retirement is associated with levels of health and well-being. The discussion presented above shows that studies have made conflicting claims concerning the impact of formal activity upon the health and life satisfaction of older individuals. By providing some new results on this topic, the present study will achieve progress in our understanding of the effects of formal activity upon the health and happiness of older persons.

### **2.3. Policy Implications**

Theories of aging are also relevant to policy debates. Connidis and Willson (2011) explain how disengagement and activity theory are highly potent at both the ideological and practical levels as they discuss the issue of mandatory retirement. The

debate concerning mandatory retirement evidences a tension between the ethics of individual justice and those of comparative justice (Connidis and Willson 2011; LaSelva 1987). The former can be associated with activity theory, and it emphasises the rights of the individual person. The latter is associated with disengagement theory, and it focuses on the rights of the group (Connidis and Willson 2011; LaSelva 1987).

Many arguments have been advanced in support of policies of mandatory retirement. Proponents argue that these policies create a system that is easier to manage as a predictable number of people will leave the labour force in any given year, resulting in a predictable number of job openings for younger individuals ready to become formally employed. Such a system avoids the need for a laborious and costly process of older worker evaluation performed with the goal of deciding whether an older worker is still adequately capable of performing the tasks of his or her job. Furthermore, elderly persons can comfortably retire without any assumptions being made by others concerning their competence or their willingness to proceed with productive activity (Connidis and Willson 2011). Chandler (1996) emphasises that policies of mandatory retirement are especially beneficial at times of high unemployment during which positions in the labour market need to be freed up for the entry of younger workers keen on beginning their careers. Along with Daniels (1988), he states that needs differ across the life course, and that the importance of employment is greater among young adults and among those in midlife than it is among the elderly. Chandler argues that “involuntary unemployment late in life is normally less of a harm, both materially and psychologically, than at earlier stages of life” (1996:42). Daniels (1988), on whom Chandler (1996) draws, argues that age discrimination should not be conceptualized in the same manner as are gender and race discrimination, since a lifespan approach shows age discrimination to function within lives, as opposed to the latter two forms of discrimination that create differences between lives. Chandler (1996) uses this idea to argue against claims that policies of mandatory retirement are discriminatory and unjust. Using similar arguments, LaSelva (1987) claims that support for mandatory retirement in Canadian politics is an expression of concern for the rights and welfare of *all* Canadian citizens. As disengagement theory proposes that the recession of the elderly from productive work and from many important social roles in other domains is functional for both them and for the larger society, it is

evident that the ideology behind mandatory retirement is conceptually linked with that undergirding disengagement theory.

On the other hand, proponents of flexible retirement tend to see mandatory retirement as an unjust infringement upon the rights of older individuals. Policies of flexible retirement grant older individuals much power to decide what their labour force involvement will be in their later years. Advocates of these policies argue that elderly persons who desire to remain employed should not be robbed of their right to proceed with labour force activity, especially if there is inadequate financial support for those in old age (Connidis and Willson 2011). Meritocratic values and principles of individual justice have been used to argue against policies of mandatory retirement. Many have argued that hiring decisions should be based on merit, rather than on age, gender, race, or on any other ascribed human traits (Chandler 1996). Furthermore, many have claimed that it is unjust to force an individual to retire at any given age, without an assessment of his or her individual abilities, on the basis of a generalization according to which most individuals of that age are no longer physically and mentally capable of productive labour (Chandler 1996; Connidis and Willson 2011; Turner 1989). Turner (1989) delves into this matter within a discussion of ideas and practices that label the elderly as useless and that downgrade the respect they receive and the status they are accorded. It is clear that the premises underlying flexible retirement policy are conceptually linked with those that undergird activity theory, according to which life satisfaction among the elderly is supported by their continued involvement in the workforce and in social life.

#### **2.4. Capabilities in the Later Years**

With aging populations throughout the industrialized world, the topic of the physical and intellectual declines that often accompany aging has acquired great importance. It is generally acknowledged that physical capabilities decline more steeply with age than do mental abilities (Givens, Jr. 1978). McPherson (1990) details declines with age in the central nervous system, the muscular system, the cardiovascular system, and the respiratory system. However, he and many others optimistically present the

reminder that such declines can be delayed or offset through regular exercise (Connidis and Willson 2011; McPherson 1990; Moody 2010). As our contemporary information economy places much more importance on intellectual abilities than on physical ones, this section of this thesis will focus on the implications of aging for mental capacities.

Many scholars have engaged the topic of what traits and skills are required in the New Economy that is based on knowledge work, and of what these requirements imply for the employability and success of older workers. This New Economy places a premium on “self-programmable workers” who easily adapt to change, whose styles of work show flexibility, and who are easily retrained when circumstances require them to update their skills or to acquire new ones. Information technology (IT) firms value education largely because it serves as an indicator of intelligence, competence, trainability, and general productivity (Adams and Demaiter 2010). A prevalent supposition is that older workers cannot easily learn new things, and this view is commonly used as an explanation for their supposed loyalty to old technologies and refusal to adapt to new technological developments (McMullin, Jovic, and Comeau 2011). These assumptions are particularly detrimental for modern day older workers because of the rate at which technology currently changes and advances. This rate leads to knowledge quickly becoming obsolete and in need of being updated (Charness and Fox 2010). Charness and Fox (2010) elaborate more generally on how our views of older workers are influenced by negative stereotypes concerning the aged prevalent throughout our society.

Many opinions on the matter of the intellectual abilities and work capabilities of older workers are quite pessimistic. Older workers are often seen as less able to adapt to change, less able to learn new things, and more rigid and inflexible in their attitudes towards and styles of work (McMullin et al. 2011; McMullin and Comeau 2011). Perhaps one of the most famous pessimistic statements on the topic of abilities across the life course has come from Albert Einstein, who received a Nobel Prize in physics for his work in quantum theory that was published when he was 26 years old. Einstein is known to have said, “ ‘a person who has not made his great contribution to science before the age of 30 will never do so.’ ” (Moody 2010:93).



Much of the research that has been conducted on work in the later years gives ample reason to view the capabilities of older workers with optimism. As is mentioned above, a commonly expressed stereotype is that older people take longer to learn new things (McMullin et al. 2011; McMullin and Comeau 2011; Moody 2010). This decline with age would be particularly handicapping in the present-day economy in which companies are constantly pressured to innovate and to adopt new technologies and procedures in order to remain competitive. Much research shows that it is in fact true that older individuals advance more slowly when learning something new. Moreover, studies have shown that reaction speed slows with age and that basic memory skills become worse in the later years (Moody 2010). Still, research investigating the relationship between work performance and age has produced mixed results (Avolio, Waldman, and McDaniel 1990). Some scholars argue that the supposed greater difficulty in training older workers is mostly myth (McMullin et al. 2011; McMullin and Comeau 2011). Some meta-analyses show that, on average, age alone explains little of the variance that is seen in work performance. Further, the time-dependent factor of work experience has been shown to be positively related to performance on the job. It has been argued that work experience is a better predictor of work performance than is age (Avolio et al. 1990). McNaught and Barth (1992) found that although older sales representatives in the Days Inn hotel chain took a longer amount of time to manage telephone calls, their booking rates for rooms were higher than were those of younger sales representatives. The cost-benefit ratio of the older workers showed more efficiency than did that of the younger workers (McNaught and Barth 1992). These results encourage a positive view of the work capabilities of older individuals even if there are some intellectual losses across the life course.

A brief examination of intellectual abilities could support optimism concerning work abilities in the later years. Intellectual abilities can be divided into fluid intellectual abilities, which are primarily based in biology, and crystallized intellectual abilities, based in knowledge acquired through experience (Li et al. 2004). Fluid intelligence involves creative, divergent, and novel thinking in solving problems. Crystallized intelligence, on the other hand, denotes practical capabilities based on extensive experience and socialization (Moody 2010). Fluid intellectual abilities are seen as

developing earlier during childhood and as undergoing decline earlier in the aging process than do crystallized intellectual abilities (Li et al. 2004). In fact, studies have shown measures of crystallized intelligence to increase with the aging process (Kay 2005). While fluid intelligence has been conceptually linked with creativity, crystallized intelligence has been related to wisdom. Psychologists have considered whether with advancing age there is a trade-off between creativity and wisdom (Moody 2010). If there is in fact such a trade-off, advancing age might involve a decline in biological potential that is compensated for by increased work experience (Li et al. 2004; Moody 2010). Generally, the accumulated life experience of the elderly could explain the extensive knowledge they demonstrate of how to handle life's good and bad moments (Moody 2010). These compensations could help explain the findings of meta-analyses that show that age in itself does not explain much of the observed variance in work performance.

Even if these interpretations are accurate, it remains true that there is reason to believe that creativity declines with advancing age. Simonton (1983) accumulated historical data on individuals who specialized in numerous fields of creative endeavour and derived a function that predicts annual productivity based on chronological age. He operationalized "creative productivity" as the rate of contribution. For an academic, this could be the rate of publication, while for an artist, this could be the rate of art gallery exhibits. This function has been referred to as an inverted J-shaped function because this is the form taken by the line representing annual productivity as a function of age (Charness 2011). A rapid rise in productivity is seen between the ages of 20 and 40. Productivity reaches its maximum in the early 40s and then shows a gradual sloping decline. After approximately 65 years of age, the rate of decline continually decreases (Simonton 1983). Other studies have generally revealed the same relationship between rate of contribution and age (Horner, Rushton, and Vernon 1986; Lubart and Sternberg 1998). Simonton (1985) also studied the quality of the creative contributions of ten eminent psychologists over the course of their lives. He based his measure of quality on the number of citations their works earned in the scientific literature. His results revealed a constant-probability-of-success model. The ratio of high quality and especially influential works to total number of contributions remained constant over the lifespan

(Simonton 1985). This outcome indicates that both quantity and quality of creative contributions follow the same pattern across the life course.

However, it must be acknowledged that many work roles do not demand high levels of creative ability. Concerning those professions in which creativity plays an important role, the responsibilities of any individual in question could be shifted somewhat towards aspects of the profession that are not intensely focused on creative production. McMullin and her colleagues (2011) convey that this idea is currently in effect in the IT sector when they argue that societal assumptions about the abilities of older workers have led to a general trend of older workers moving on from roles demanding innovation to other roles less focused on creativity, such as those of management.

While there might be significant declines with advancing age that could impact performance in some work roles, elderly individuals, in general, still possess enough functional capacity to perform well in the labour force. This is especially so because strengths can compensate for losses in particular intellectual abilities.

## **2.5. The Social Significance of Post-Retirement Work**

As is mentioned above, with an aging population and concerns that Canada will soon be facing labour and skill shortages, efforts have been made to increase the labour force participation of older individuals. This commitment has spawned a number of research efforts aimed at discovering what factors are associated with older individuals resuming labour force activity after retirement. The development of incentives for continued work activity after retirement must be informed by knowledge of the personal, structural, and demographic factors that are associated with return to work activity after a first retirement. The present study will build on work that has already been done on this topic through an analysis that considers the various interactions that may occur among factors that are associated with involvement in post-retirement work activity.

The recent past has seen large numbers of older men and older women working until later in life than past retirement statistics would have led us to predict (Cahill, Giandrea, and Quinn 2006, 2007). Currently, about one-half of retiring individuals follow a nonstandard path to full retirement that involves partial retirement and/or returns to the labour force after an episode of retirement (Maestas 2010). Some scholars claim that many present-day workers will seek to gradually leave the workforce instead of making one transition from full-time employment to full retirement (Davis 2003; Dendinger et al. 2005; Morrow-Howell 2007; Pengcharoen and Shultz 2010). Workers who are approaching retirement might seek work arrangements involving fewer hours of work and lower levels of responsibility, greater flexibility in how they arrange their work schedule, as well as the opportunity to take up shared positions. This staged withdrawal from the workforce allows for a gradual process of adjustment to life as a retiree (Pengcharoen and Shultz 2010).

There are individual and organizational benefits to older individuals carrying on with work activities after formal retirement. At the level of the individual, some research shows that taking on bridge employment is related to higher levels of satisfaction with life and with retirement, as well as being beneficial for physical and mental health (Pengcharoen and Shultz 2010). Kim and Feldman (2000) draw on Atchley's (1989) continuity theory of aging, which suggests that successful aging occurs when elderly individuals maintain a lifestyle similar to that of their earlier years, and argue that bridge employment allows older workers to avoid a sudden, dramatic, and highly stressful change in daily patterns after retirement. They also draw on continuity theory when they state that bridge employment provides older workers with the opportunity to maintain valued social connections with co-workers.

Bridge employment can be of great benefit to organizations for several reasons. Downsizing companies often lack full precision in differentiating between their good and their less effective employees. The loss of talent that thereby occurs pressures companies to either rehire some of the workers they have laid off or to train new employees (Davis 2003). In this and in other staffing issues, the practice of bridge employment benefits organizations (Davis 2003; Kim and Feldman 2000). Through this practice, labour

shortages are reduced, compensation for the loss of experienced employees is accomplished, and training costs are mitigated (Davis 2003). The possibility of engaging in bridge employment can serve as an incentive to encourage older workers to undergo an early retirement. Additionally, bridge employees provide organizations with highly skilled and more easily accessed alternatives to contingent workers as a means of overcoming staffing difficulties (Kim and Feldman 2000). Caputo (2006) emphasises the productivity and high capacity of older workers and argues that society will benefit much from the enactment of policy that will attract older workers to prolong their labour force involvement.

For the reasons noted above, it is important to better understand what influences involvement in paid work after retirement. Numerous advantages can accrue to the effective management of individuals, organizations, and the larger society through successful efforts to understand the factors that impact the retirement decisions and behaviours of older individuals. Understanding the underlying processes involved will result in greater success as workers and retirees, in higher levels of well-being in places of work and in retirement, as well as in more satisfactory processes of adjustment to the changes involved with growing older (Pengcharoen and Shultz 2010). Davis (2003) adds that knowledge of the factors involved in post-retirement work decisions can help with the management of early retirements and of the employment issues with which both individual people and organizations are confronted.

Retired individuals have numerous motivations to return to work. Some are not financially secure enough to fully retire, while others find themselves disliking retirement or missing the social, productive, and challenging aspects of work (Pengcharoen and Shultz 2010; Statistics Canada 2006). These motivations imply that an elderly individual might return to work after retirement for the purpose of intrinsic satisfaction. Among the American adults aged 50 to 70 years who were surveyed in the MetLife Foundation and Civic Ventures 2005 *New Face of Work Survey*, the four most prominent aspects of the work they expected to perform in retirement were: “staying involved with other people (59 percent), having a job with a sense of purpose (57 percent), having an additional income source (52 percent), and having a job that benefits or helps the community (46

percent)” (Gonyea and Googins 2006-07:79, 80). Maestas (2010) studied individuals who expected not to return to work after retirement. She found that those who nonetheless returned to work were more likely to have found themselves not enjoying retirement as much as they had expected than they were to have received unfortunate news about their financial circumstances. Morrow-Howell (2007) argues that the majority of those aged 45 years and older who hope to work past the “normal” retirement age plan to do so for reasons of income and health insurance, and that almost a third plan to do so for interest and pleasure. This shows that a substantial proportion of those who plan to work in later life plan to do so for intrinsic benefits.

## **2.6. Factors Related to Return to Work After Retirement**

As post-retirement work is a complex phenomenon, a thorough understanding of the factors associated with the likelihood of an older individual engaging in paid work after retirement requires an examination of a wide set of attributes of older individuals and of their environments. The research literature attributes more importance to the influence of factors that are not related to work than to the influence of work-related factors in older workers’ age at retirement and engagement in bridge employment (Pengcharoen and Shultz 2010). This suggests that an adequate understanding of what influences retirement decisions must involve an analysis of many aspects of a person’s past and present circumstances.

Davis (2003) links the many factors that coordinate to influence the likelihood of engagement in bridge employment when he claims that individuals make life decisions within an “opportunity structure” that is based upon their biographical characteristics and the features of their environment. The characteristics of this opportunity structure are of strong influence in older persons’ decision to engage in bridge employment, and also in their decision to perform bridge employment in the same industry as that of their past work or in a different industry (Davis 2003). This situation can be understood through an analysis of the employment circumstances of older entrepreneurs. Because they are not as reliant upon traditional employment within large business establishments that are often

reluctant to hire older workers, older entrepreneurs possibly possess an advantage in finding bridge employment (Kim and Feldman 2000). Moreover, after many years of building a network of career-related contacts and of accumulating experience in his or her industry, an entrepreneur engaging in a second career after retirement is likely to choose to remain within the industry of his or her past (Cahill et al. 2006; Davis 2003).

### **2.6.1. Gender**

The research literature, for the most part, shows that men are more likely than women to resume labour force activity after a first retirement (Griffin and Hesketh 2008; Lefebvre et al. 2011; Maestas 2010). Statistics Canada (2006) finds men to have a 25 percent probability of returning to work post-retirement, while women have an 18 percent probability of doing so. However, Griffin and Hesketh (2008) explain that research on this topic has produced some inconsistent results. Some studies have shown women to be equally or more likely than men to engage in bridge employment (Griffin and Hesketh 2008). Griffin and Hesketh (2008) emphasise the need to control for finances in studies on this topic since the effect of gender might be based on the fact that women tend to hold lower paying jobs and therefore hold expectations of the future that differ from those of men.

It is possible that gender differences in post-retirement work are related to the gendered norms that impact work across the life course. Although recent times have seen a convergence in the roles performed by men and women, a gendered division of labour still exists according to which men are expected to adopt more demanding work roles and to perform less work in the home while women are expected to place more effort into household responsibilities and childcare (Calasanti 2004; Connidis and Willson 2011; McMullin 2010; Murray, Linden, and Kendall 2011; Teevan 2011). This can conceivably result in a higher proportion of men than of women becoming involved in bridge employment after a first retirement.

### 2.6.2. Marital Status

Many studies addressing marital status and bridge employment suffer from the limitation that they examine only two marital status categories, “married” and “not married.” Some of these studies have not found significant differences between these two marital status categories in the likelihood of working past retirement (Davis 2003; Lefebvre et al. 2011). Others have found differences by marital status. Gustman and Steinmeier (1984) report that those older individuals who are not married are more likely to be fully retired. Contrary to Gustman and Steinmeier (1984), some studies have argued that the married might decide not to engage in bridge employment because their spouses provide them with the companionship they require to make up for the lost social interaction they used to enjoy at work (Davis 2003). In accordance with this idea, Kim and Feldman (2000) find that those whose spouses are employed, and therefore missing from the home during the regular hours of work, are more likely to be involved in bridge employment. However, in a study of early retirees from the private sector, Davis (2003) did not find retirees who are not married to have a higher likelihood of involvement in post-retirement paid work than those who are married.

It is likely that there are differences in probability of involvement in bridge employment based on finer distinctions in marital status. Individuals who have never married are less likely to have children for whom they are financially responsible than are individuals who are currently unmarried because they are divorced. Szinovacz, DeViney, and Davey (2001) have argued for the relevance of family circumstances to paid work in later life by claiming that financial responsibility for dependent family members tends to keep workers in the labour force. As is the case with those who are currently married, divorced individuals are likely to have children, however, some scholars have argued that the unmarried are more likely to return to work after retirement because they lack the companionship from a partner that can substitute for the lost social experiences previously enjoyed at work (Davis 2003). Widowed individuals are at higher risk of depression (Onrust and Cujipers 2006), and depression can pose an obstacle to motivation to engage in paid work (Lerner et al. 2004). Therefore, the present study



investigates four marital status categories: “married or in a common-law union,” “separated or divorced,” “widowed,” and “single” (never having married).

### **2.6.3. Age**

Current age and age at the time of retirement have often been examined as influences upon bridge employment. One Statistics Canada (2006) report finds that those who first retire before the age of 60 are more likely to resume work activity, and this might be because young retirees are often not adequately financially or psychologically prepared for retirement. Likewise, Maestas (2010) finds that those who first retire in their early 50s are more likely to resume labour force activity. She speculates that this is because of policy that impedes the accumulation of pension benefits while one is still a regular salaried employee. Thus, those who are drawn by the incentive of claiming pension benefits at an early age must leave their earlier careers and generally must work elsewhere if they desire to work for pay and accumulate pension benefits concurrently (Maestas 2010). Cahill and his colleagues (2006) also find that those leaving their careers earlier in life are more likely to become involved in a bridge job. However, Griffin and Hesketh (2008) find in an Australian study that age at retirement is unrelated to the probability of return to work.

Other research finds present chronological age to be strongly and negatively related to the probability of returning to work post-retirement (Davis 2003; Lefebvre et al. 2011). This might be at least partially because of the fact that age serves as a proxy for health (Davis 2003). It is likely that the relationship between younger age and return to the labour force after retirement is at least in part a cohort effect. The younger individuals examined in studies of retirement are more likely to be of higher levels of education and high levels of education, as is explained below, have often been found to be positively related to resumption of work activity after a first retirement (Griffin and Hesketh 2008; Lefebvre et al. 2011). Furthermore, recent times have involved changes in norms concerning and conceptions of retirement that encourage older individuals to remain active in the labour force (Ekerdt 1986). As members of the younger segments of the

older population tend to be quite capable of productive activity, present-day norms concerning age and workforce activity likely provide them with strong motivation to become involved in bridge employment after retirement.

#### **2.6.4. Socioeconomic Status**

Occupational status is especially important to the topic of bridge employment because individuals of differing levels of occupational prestige tend to have different attitudes towards work. Statistics Canada (2006) finds professionals to be the most likely to return to work after retirement, followed by managers, and then by technicians. Similarly, Maestas (2010) claims that professionals and managers are more likely to undergo a partial retirement or to return to the labour force after a first retirement than are labourers, operators, and those who work in the service sector. Studies have shown that levels of continued work late in life are high among men who were employed in higher status occupations marked by greater amounts of complexity. On the other hand, those who were employed in low status jobs marked by low levels of autonomy, monotonous work, and high levels of danger and physical demand tend to have undergone an earlier retirement (Raymo et al. 2010).

Another central dimension of socioeconomic status of importance to the topic of bridge employment is level of income. The results of studies of income and bridge employment are mixed. Kim and Feldman (2000) find salary to be inversely related to the likelihood that one takes up bridge employment. They suggest that individuals of higher levels of income at the time of retirement are more likely to have savings that will allow them to maintain their standard of living in retirement without continued paid employment. They further state that those with ample pension benefits are less likely to require paid employment as a supplement to their monthly income. In a study of Waves 1 to 5 of the *Health & Retirement Study* in the U.S., Caputo (2006) found that increased levels of income in 2000 resulted in a lower likelihood of respondents in the normal retirement years claiming to be completely retired. He suggested that this might be because increased financial incentives motivated older individuals to proceed with paid

work. Griffin and Hesketh (2008) find income to be unrelated to the likelihood of engagement in post-retirement work, however, they suggest that this might be because of the effect of multicollinearity between income and education in their study. As is explained below, higher levels of education have often been found to be associated with involvement in bridge employment. Cahill and his colleagues (2006) argue that there is a U-shaped relationship between engagement in bridge employment and wage level. Low-wage individuals are likely to take on bridge work because of financial necessity, while high-wage individuals are likely to do so for reasons related to intrinsic life satisfaction (Cahill et al. 2006). Cahill and his colleagues (2006) thereby emphasise that there are numerous reasons why an older individual might choose to return to paid work after retirement.

Issues of intrinsic versus extrinsic motivation for work are of relevance to this discussion. Research has shown that positive financial circumstances and satisfaction with one's own finances are negatively related to the likelihood of planning to engage in bridge employment (Davis 2003; Kim and Feldman 2000; Weckerle and Shultz 1999). Davis (2003) argues that lengthy job tenure among private sector employees is likely to result in positive financial circumstances that obviate the need for post-retirement paid work. Scholars have also found that various measures of career motivation and commitment are positively associated with involvement in bridge employment in the same field as that of one's career employment (Davis 2003; Kim and Feldman 2000). Kim and Feldman (2000) explain that among university faculty, length of job tenure is strongly linked with career motivation and commitment. Thus, it is not surprising that they find that among this group of workers, length of job tenure is positively associated with continued employment within the same field in the later years.

A third dimension of socioeconomic status is education, which is a potent demographic variable that influences one's attraction towards work, as well as one's preferences for specific types of work. Lefebvre and his colleagues (2011) find education to have a strong positive association with the probability of return to work after retirement. Likewise, Griffin and Hesketh (2008) find education to be related to paid work in retirement in Australia. They speculate that high levels of education grant the

type of skills that make one qualified for many types of jobs and the contacts that facilitate the finding of paid work. They suggest that the need for generativity might be stronger among those who are more educated. Griffin and Hesketh (2008:106) write,

It is possible that when compared with those with lower levels of education, those with higher levels will have a greater need for generativity or be less likely to want to give up any opportunity to use their skills and training and therefore be more inclined to continue with some form of retirement work.

Contrary to numerous other studies, Maestas (2010) finds that level of education is unrelated to the likelihood of becoming involved in bridge employment. She argues that post-retirement work may thus not be strongly related to a lack of wealth or to poor retirement planning.

Many research studies have shown the positive relationship between education and health (Cutler and Lleras-Muney 2006; Goldman and Smith 2011). In fact, over the past quarter century, the importance of education to health has increased (Goldman and Smith 2011). As good health has consistently been shown in the literature to be associated with an increased likelihood of return to work after retirement (as is discussed below), this offers an indirect means through which higher levels of education might be associated with a higher probability that one will take up post-retirement work.

#### **2.6.5. Health**

Health is another variable that has figured prominently in this literature. Much research finds respondents in fair and poor health to be much less likely to resume work after retirement than those with high levels of health (Cahill et al. 2006; Griffin and Hesketh 2008; Lefebvre et al. 2011; Statistics Canada 2006). In a study of fulfilled and unfulfilled expectations of working in retirement, Maestas (2010) finds that those who did not fulfill their expectations of work were far more likely to have experienced a health shock than were those whose expectations of work were fulfilled. Maestas (2010) addresses the issue of unfulfilled expectations of post-retirement work and claims that health shocks that result in increases in medical expenses may limit the ability of older

individuals to proceed with work activities. Contrary to these studies, Davis (2003) finds health factors to be unrelated to involvement in bridge employment.

## **2.7. Interactions Investigated in the Present Study**

Three interaction terms involving gender are examined in the investigation of factors associated with bridge employment because gender remains important to one's involvement in paid work throughout adulthood. This importance encourages an exploration of how gender in interaction with other factors might be associated with involvement in paid work after retirement. Much scholarship has argued that even in contemporary times, gender norms stipulate that men are the ones primarily responsible for productive, paid labour in the public sphere, and that women are the ones primarily responsible for reproductive, unpaid labour in the private sphere (Calasanti 2004; Connidis and Willson 2011; McMullin 2010; Murray et al. 2011; Teevan 2011).

Much scholarly work suggests the need to test the interaction between gender and marital status in the investigation of factors associated with bridge employment. In retirement, women's roles tend to be a continuation of the domestic responsibilities of their earlier lives. On the other hand, the freedom that characterises men's retirement is based on freedom from the domestic obligations that remain the wife's domain (Calasanti 2004). The experience of widowhood differs between men and women, in part because of socioeconomic differences between the genders. These socioeconomic differences explain why widowed women, and not men, are often left in troubled financial circumstances following the death of their spouse. On the other hand, men are often socially dependent on their wives because relationships with family members are primarily their wives' responsibility. This serves to explain why widowed men experience more social isolation than their female counterparts (Connidis and Willson 2011; McPherson 1990). Furthermore, socioeconomic differences between the genders explain why men's standard of living tends to improve following a divorce, while that of women tends to decrease following the dissolution of a marriage (Connidis and Willson 2011; Teevan 2011). It might therefore be the case that the associations between the four

marital status categories investigated in the present study and likelihood of having been involved in post-retirement paid work will differ for the two genders.

Many more studies emphasize how within marital relationships, attitudes towards and behaviours in retirement, as well as reasons behind retirement decisions, differ between men and women. Some expect that financial responsibility for family members figures more prominently in men's retirement choices, while the retirement decisions made by women have more to do with social responsibility for family members, as well as with the strength of their familial ties (Szinovacz et al. 2001). Szinovacz and DeViney (2000) elaborate on the extent to which a husband's concern to maintain his authority within the marriage can be an important motivation for him to proceed with workforce activity in the later years. While husbands will often proceed with paid work in the later years to maintain their patriarchal authority, wives will often proceed with labour force activity in the later years only to the extent that the additional income is necessary, and they will often accommodate to their husbands' desire to maintain status in the relationship (Szinovacz and DeViney 2000). Family responsibilities throughout the life course cause many women to experience a fragmented working life that prevents them from achieving a satisfactory financial situation that will avoid the need for them to continue with paid work activities in their later years (Kim and Feldman 2000; Pleau 2010; Szinovacz and DeViney 2000). Accordingly, Pleau (2010) explains that childless women have work records that resemble those of men, including longer tenure of jobs and fewer career interruptions. This leads to childless women leaving the work force at earlier ages (Pleau 2010) and likely results in safer financial circumstances that preclude the need for paid work after retirement.

I expect that men who have never married will be less likely to return to work after retirement than men who have married because they are less likely to have children for whom they are financially responsible. Since norms suggest that financial responsibility for children rests primarily with the father, whether an older man has children might play an important role in whether he believes he needs to earn an income from a bridge job after his retirement. These ideas concur with Szinovacz and her colleagues (2001) who suggest that financial familial responsibilities are of greater

significance in men's retirement decisions, while social familial responsibilities are of greater influence in those of women. I also expect that retired women who are separated or divorced will be more likely than other retired women to return to work for financial reasons because they are likely to have had erratic work records and because they can no longer rely upon the finances of their former husbands.

Interaction terms between gender and current age, and between gender and age at retirement are included in the analysis. This is in recognition of the fact that gendered trends and norms in paid work have gradually changed over time, and in recognition of the fact that men and women tend to have different career trajectories that place them in different financial circumstances in their later years. Symbolic interactionism argues that norms are socially constructed and negotiable; thus, norms can change with the passage of time. The changing of stereotypes is a slow process, and while gender stereotypes have loosened in the past few decades, they still impose considerable constraints on human behaviour. Many "masculine" roles have been opened up to women, and there has been a great increase in the entry of women into paid work in the past fifty years (Teevan 2011). Up until the 1960s, the household and workforce division of labour was structured according to a model in which men are the breadwinners of the family (Crompton and Harris 1998). However, after 1961, dramatic increases occurred in the entry of women into paid labour (McMullin 2010). Since then, convergence has occurred between men and women in wages, in job tenure, and in domestic obligations (Teevan 2011), however, "labour markets are [still] structured such that women have fewer opportunities for promotion than men, which, in turn, is related to women's primary responsibility for domestic labour within families" (McMullin 2010:44). Furthermore, men's involvement in housework has progressed more gradually than has women's involvement in paid work (Murray et al. 2011). The gradual changes in gendered trends and norms in paid work suggest that younger cohorts of men and women might be more similar in their work patterns. I expect that younger age will have a stronger positive association with the probability that a woman returns to paid work after retirement because being part of a younger cohort indicates having come of age at a time when gendered norms surrounding paid work had loosened, or at least had begun to loosen. Conversely, being part of an

older cohort indicates having come of age at a time when norms still strongly favoured men for involvement in paid labour (Crompton and Harris 1998).

It is expected that higher age at retirement will have a stronger negative association with the likelihood of a man involving himself in post-retirement paid work than it is with the probability that a woman becomes involved in bridge employment. This is because older men have generally had more stable work trajectories that have allowed them to accumulate more wealth and retirement savings, and that have provided them with a higher likelihood of having a private pension. Older women have typically had more erratic and fragmented work trajectories because of household and childcare responsibilities, and this has prevented many of them from achieving high levels of savings and of retirement income, such as through private pensions (Kim and Feldman 2000; Pleau 2010; Szinovacz and DeViney 2000). For a man, retiring at the age of 65 years and older likely means having much financial safety in retirement after many years of stable employment; bridge employment is thus financially unnecessary. Current pension plans encourage many workers to retire at a later age in order to increase their retirement income and their financial safety after retirement (Friedberg and Webb 2005). For a woman, later retirement after many years of a fragmented work trajectory is less of a benefit for financial safety in the retirement years. This situation has encouraged many older women to be dependent upon their husbands' benefits (Szinovacz and DeViney 2000). This suggests that higher age at retirement has a stronger negative association with the likelihood of a man returning to paid work than it has with that of a woman.

In the investigation of how bridge employment is associated with levels of health and well-being, interaction terms between return to work and current age, and between return to work and age at retirement, are tested because it is conceivable that associations of health and well-being with continued labour force activity in the later years are contingent on the age at which one is performing this paid work. The activity theory of aging would predict that continued activity is beneficial for health and well-being throughout all of one's later years. The disengagement theory of aging would predict that especially in the later stages of later life, continued activity is associated with a worse state of health and happiness because of inevitable declines with age in physical and



mental capabilities and energy levels. And so, I expect that positive associations between return to work after retirement and measures of health and well-being are attenuated among those of higher current age and among those of higher age at retirement.

## **2.8. Hypotheses**

Recall that the first research question this study addresses is: what factors are associated with the likelihood that a retired individual has engaged in paid work after first retirement? In relation to this question, I expect to find that men are more likely to return to work after retirement than women because of gendered societal standards concerning paid work. Younger cohorts of retirees are expected to be more inclined to return to work because they are likely very fit for productive activity and are therefore likely to follow present-day trends (Cahill et al. 2006, 2007) and norms (Ekerdt 1986) that encourage productive activity until later in life. In accordance with some other studies (Cahill et al. 2006; Maestas 2010; Statistics Canada 2006), I expect that my results will show that those who retired at a younger age are more likely to have engaged in bridge employment. I expect to find that those of higher levels of education are more likely to pursue the opportunity for generativity in retirement that bridge employment provides (Griffin and Hesketh 2008). Those of low income and those of high income are expected to be more likely to engage in bridge employment; the former because bridge employment is a financial necessity, the latter because they are attracted to the personal rewards that paid work provides (Cahill et al. 2006). It is expected that those of good general health will be more likely to become involved in bridge employment because they are more likely to be fit for the productive effort that paid work requires.

I expect to find that men who have never married are less likely to engage in post-retirement paid work than those who have, and that women who are separated or divorced are more likely than other women to become involved in bridge employment. It is also expected that younger current age will have a stronger positive association with the likelihood of women returning to work after retirement, while higher age at retirement

will have a stronger negative association with the likelihood of men returning to work. The rationales behind these hypotheses are explained above.

With regards to the investigation of the association of bridge employment with levels of health and well-being, I expect to find that return to work after retirement is associated with higher levels of general health, general mental health, and life satisfaction. However, in accordance with the disengagement theory of aging, I predict that my results will show that these positive associations are not as strong among those of higher current age and among those who first retired at an older age.

## **2.9. Summary**

The current Canadian demographic trend of an aging population and workforce will present researchers and policymakers with many challenges in the near future. Initiatives have been put forward to address this issue of great importance. Many of these initiatives are aimed at increasing the labour force participation of older individuals. In order for these policies and programs to succeed, the factors that are associated with prolonged workforce activity must be understood. This includes the phenomenon of return to work after retirement. The present study aims to fill a number of gaps in the literature through a comprehensive examination of this topic. Numerous variables and various interactions among these variables are investigated as potential correlates of the probability that one has engaged in post-retirement work.

Beyond a study of factors that are correlated with the likelihood of having been involved in bridge employment, this study is concerned with how return to paid work after retirement is associated with the health and well-being of older individuals. Elderly individuals whose health and happiness are compromised by their post-retirement work activity will be unlikely to sustain this activity for a lengthy period of time. On the other hand, older workers whose health and quality of life are benefiting from their work efforts after retirement will likely proceed with these efforts with much commitment and enthusiasm. Furthermore, it would be socially unjust to encourage productive work among retired individuals for the benefit of the larger society if this benefit is to be

realized at the expense of their health and life satisfaction. For all of these reasons, there is a need to understand how post-retirement work is associated with the health and happiness of retired workers. This study addresses this need by investigating the association of bridge employment with three measures of health and well-being. In the process of doing so, this study will contribute new results to help answer the question of how formal activity in the later years is associated with levels of health and life satisfaction, a question which thus far has led to a mixed set of answers.

This study is conducted within the context of the activity, continuity, and disengagement theories of aging. These theories will be used to help interpret this study's results, and this study's results will be utilized to shed light on the implications of these theories for retirement and post-retirement work.

The next chapter describes the data, methods, and procedures that were used to produce this study's results.

## Chapter 3

### 3. Methods

The present investigation is a largely explorative study concerned with the phenomenon of post-retirement work in Canada. Recall that the two main research questions are:

- 1) What factors are associated with the likelihood that a retired individual has engaged in paid work after first retirement?
- 2) How is post-retirement work associated with the levels of health and well-being of older individuals?

Two sets of statistical analyses are conducted in this thesis to address these questions.

Data analyses are based on a secondary statistical analysis of the data acquired in the GSS-21. The information provided in this chapter concerning the GSS-21 dataset has been obtained from Statistics Canada (2007). A range of demographic, human capital, and health/well-being variables were investigated, mostly through logistic regression analyses. All statistical analyses in the present study were conducted with the Stata 11 statistical software package.

#### **3.1. Data Source**

The source of the data used in this study is the GSS-21, a cross-sectional dataset that is effective for the present analysis because it includes questions addressing a wide range of topics of significance to the lives of middle-aged and older Canadians, including health/well-being, retirement plans and choices, family and social circumstances, and levels of education and income. The population targeted in the GSS-21 was all people aged 45 years and older who live in Canada, with the exclusion of the residents of the Yukon, the Northwest Territories, and Nunavut, as well as with the exclusion of those who are full-time residents of institutions. Statistics Canada (2007) estimated that the

coverage of the GSS-21 target population was higher than 92 percent. The total sample of the GSS-21 was distributed across Canada's ten provinces.

### **3.2. Sampling Method**

The sample studied in this survey included earlier respondents of the *GSS 2006, Cycle 20* (GSS-20) who were aged 45 years and older at the time that data was being collected for the GSS-21, as well as people telephoned using Random Digit Dialing (RDD). RDD is a probability sampling technique effectively described in Neuman and Robson (2009). The respondents from the GSS-20 are referred to as the Targetted Respondent sample (TR), while the respondents of the GSS-21 telephoned through RDD as referred to as the RDD sample. It should be noted that the respondents of the GSS-20 were themselves also selected by means of RDD sampling techniques. The development of the sampling frame for the GSS-21 made use of the Elimination of Non-Working Banks (ENWB) sampling technique, a method of RDD, explained in Statistics Canada (2007). Thirty seven percent of the new numbers dialed through RDD for the GSS-21 reached households eligible for participation in the survey. Efforts were made to interview one randomly chosen eligible member of each household aged 45 years and older.

The GSS-21 made extensive use of stratified probability sampling, which is a technique explained in Neuman and Robson (2009). The ten Canadian provinces were divided into sets of strata. The following Census Metropolitan Areas (CMAs) were designated as their own separate stratum: "St-John's, Halifax, Saint John, Montreal, Quebec City, Toronto, Ottawa, Hamilton, Winnipeg, Regina, Saskatoon, Calgary, Edmonton, Vancouver and Victoria" (Statistics Canada 2007:3). Those CMAs not included in this list are located in the provinces of Ontario and Quebec, and two additional strata were created by aggregating these remaining CMAs by province. Lastly, the non-CMA areas of each of Canada's ten provinces were designated as their own separate stratum, producing a total of 27 strata among which the sample of the GSS-21 was divided.

A minimum sample size was determined for each province that would allow certain estimates to have a low-enough amount of sampling variability at the level of the stratum. After these minimums were met, the remaining portion of the sample was assigned to the strata in a manner that allowed for an effective balance between the needs for precision of estimates at the national and stratum levels. After the determination of the strata sample size, the TR sample was spread across the 27 strata through the use of the geographic information acquired in the GSS-20, while the remainder of the sample at the level of the stratum came from the distribution of the RDD sample.

### **3.3. Data Collection**

The interviews conducted for the GSS-21 involved a wide range of questions on topics of importance to middle-aged and older Canadians, including health/well-being, family and social circumstances, main activities, retirement plans and experiences, care giving/receipt, educational history, etc. The telephone interviews were conducted in the official language of the respondent's choice with the help of computer-assisted telephone interviewing (CATI), a survey research technology explained in Neuman and Robson (2009). Proxy interviews were permitted in cases where a respondent was unable to take part in the survey either because of not being able to speak English or French, or because of a health problem or physical or mental condition. While the TR sample was interviewed in nine waves, from March to December 2007, the RDD sample was interviewed in seven waves, from May to December 2007. These waves consisted of overlapping two-month collection periods, with the beginning of each month marking the start of a new collection wave. The TR sample consisted of 10,403 respondents, while the RDD sample was made up of 13,001 respondents, resulting in a total sample size of 23,404 respondents for the GSS-21.

By necessity, this sampling procedure excluded those without landline telephones as well as those only using cellular telephones. The former group represents less than 0.9 percent of the population targeted by the GSS-21, while the latter group represents less than 6.4 percent of this population (*Residential Telephone Services Survey*, December

2007, cited in Statistics Canada 2007). Decima Research (2006) claims that with increasing age, the probability of replacing one's landline telephone with one's cellular telephone decreases. This document presents statistics that show that 19 percent of wireless users between the ages of 18 and 34 have replaced their landline telephone with their cellular telephone, that five percent of wireless users from 35 to 54 years of age have done so, and that only one percent of wireless users of 55 years of age and older are only making use of cellular telephones. The present study's analytical sample (as is explained below, based on retirees who were 50 years of age and older at the time of the survey) is of an older age composition than the entire GSS-21 target population (statistics not shown). These statistics from Decima Research (2006) therefore suggest that within the population of interest in the present study, substantially less than 6.4 percent of individuals are only making use of cellular telephones.

It was assumed that because those without telephones represent a small proportion of the target population, their traits were not sufficiently different from those of the remainder of the target population to have impacted the estimates calculated. The 2005 *Survey of Household Spending* (cited in Statistics Canada 2007) revealed that telephone ownership is lowest among those households earning the lowest amount of income: less than \$10,000 per year. Telephone ownership was found to be 88 percent in this income group, which is substantially lower than the over 96 percent telephone ownership for all other categories of income (*Survey of Household Spending 2005*, cited in Statistics Canada 2007). Statistics Canada (2007) claims that coverage in the GSS-21 was lowest for households of lowest income, and so this socio-demographic group was slightly underrepresented within the data accumulated. Statistics Canada (2007) mentions that the GSS-21 had a non-response rate of 42 percent. This also might have introduced some bias in the data accumulated.

Additional information concerning the sampling and interviewing procedures followed in the development of the GSS-21 can be obtained from Statistics Canada

(<http://www.statcan.gc.ca>).

### **3.4. Sample Characteristics**

While the total sample size of the GSS-21 was 23,404 respondents, the present study is based on a sample composed of GSS-21 respondents of at least 50 years of age at the time of the survey who had at some point in their lives retired. While these two criteria result in a sample of 9,561 respondents, after imputation of most of the missing income data and list-wise deletion of all remaining subjects lacking data on any of the variables investigated, I was left with a final analytical sample of 8,876 respondents. The present study is based on comparisons between older individuals who have returned to paid work after retirement and others who have not. Thus, only retirees are of interest in this study. The age restriction of 50 years and older was chosen because too low a proportion of those from the ages of 45 to 49 years (the youngest age group surveyed) in the GSS-21 have undergone a retirement. While only three percent of the GSS-21 respondents from 45 to 49 years of age have retired, eight percent of respondents from 50 to 54 years of age have undergone a retirement, and 24 percent of respondents between 55 and 59 years of age have at least once retired.

### **3.5. Caveat**

It should be noted that the present study made use of the unweighted GSS-21 microdata file. The results obtained are therefore not adjusted for biases created by the sampling strategy employed and by participant non-response. This places limitations on the extent to which the results obtained are representative of the target population of the survey. This limitation should be taken into account as the results here presented are considered.

### **3.6. Variables**

The variables from the GSS-21 utilized in the present study focus on health/well-being, human capital, family circumstances, demographic characteristics, and retirement decisions. Appendix A displays all questions asked in the GSS-21 to obtain the



information used in the present study. Appendix B presents all recoded variable categories. All categories serving as reference categories in the logistic regression analyses (explained below) are bolded in the appendices. All variables are composed of categories that are mutually exclusive and exhaustive (except for current age, which begins with 45 to 49 years). Furthermore, within my final analytical sample, there are no variable categories with inordinately low numbers of respondents within. Unless otherwise noted, all variables have missing data within an acceptable range (i.e. less than 5%).

### **3.6.1. Dependent Variables**

The first dependent variable in the present study is return to work after retirement. It serves as a dependent variable in the analysis performed to answer the first research question, and it serves as an independent variable in the analysis aimed at answering the second research question. In the former analysis, those who have returned to work post-retirement are the category being modelled, while those who have not returned to work post-retirement compose the reference category in both analyses.

The investigation of the second research question involves three outcomes that are tested: general health, life satisfaction, and general mental health. A set of independent variables, including post-retirement return to work, and two sets of interactions among the independent variables, are used to predict whether respondents will rate their own health as good, whether they will report that they are satisfied with their lives as a whole, and whether respondents will rate their own mental health as being good. Good health, satisfaction with one's own life, and good mental health are the categories being modelled, while fair/poor health, dissatisfaction with one's life as a whole, and fair/poor mental health serve as the reference categories.

### 3.6.2. Independent Variables

Six questions from the GSS-21 are used to construct the set of independent variables that are used in both analyses of the present study and that will be referred to as the “main” independent variables. The following descriptions mention the reference categories of each of these independent variables. All other categories are represented by dummy variables within the logistic regression equations analyzed. The appendices provide complete information on the categories that compose each independent variable.

Gender, marital status, current age, and age at retirement are four demographic characteristics that serve as main independent variables in the present study. The category of men serves as the reference category for the gender variable. The marital status variable is based on four categories: married or living common-law, separated or divorced, widowed, and single (never married). The married or living common-law category is the reference category. Each of these four marital status categories is a potent social status that can impact retirement decisions as well as levels of happiness and well-being. The current age variable is based on three age groups: 50-59 years, 60-69 years, and 70 years of age and older (reference category). The age at retirement variable is also based on three different age groupings: 54 years of age and younger (reference category), 55 to 64 years of age, and 65 years of age and older. This coding is based on the fact that 65 years of age is the normative age at which to retire.

The final two of the six main independent variables, highest level of education and annual personal income, are measures of socioeconomic status. The first category of the level of education variable is composed of those who have not received a high school diploma (reference category), the second represents those who have either a high school diploma or have attended post-secondary school, and the third represents those who have graduated from university. These three educational categories were chosen because they are based on two academic achievements, high school and university graduation, that are known to powerfully impact many life outcomes. More generally, education is an indicator of social status that influences an individual’s attitudes towards work as well as influencing the types of work an individual is likely to perform.

Level of annual personal income is a second socioeconomic variable included in the present study. The use of this variable suffers, however, from the weakness that its relationship with the return to work outcome variable in the first analysis can also be at least partly based in the reverse causal direction: return to work after retirement can increase a respondent's reported personal income. A limitation of GSS-21 is that no question focuses on respondents' income levels earlier in their lives. Were such a variable available, it would have been possible to better assess how socioeconomic status influences return to work after retirement. Likewise, variables focused on respondents' earlier life careers, if available, would have provided valuable information for establishing correlates of return to work after retirement.

Nonetheless, it is instructive to learn how personal income is associated with return to work after retirement. Four income categories were constructed by aggregating the income brackets used in the GSS-21: \$0 to \$29,999, \$30,000 to \$49,999, \$50,000 to \$79,999, \$80,000+. These categories were constructed to represent low income (reference category), two levels of middle income, and high income.

Because 2,740 cases (29%) within the sample are missing data on this variable, Stata 11's "mi impute" command was used to impute this missing data using data from the gender, current age, marital status, and level of education independent variables. The former three variables were used for this imputation because they are central demographic characteristics potent in influencing many life outcomes, including level of income, and the latter was chosen for this imputation because it is a key human capital variable that influences socioeconomic outcomes. The imputation was performed within the analytical sample and with all variables coded as they are coded in the main analyses. The "force" command was used to allow the imputation to proceed despite the fact that the education and marital status variables themselves had some missing data. Twenty data sets were imputed, with 143 cases (1.5%) left missing. The income data in all twenty imputed data sets was distributed across the four income categories very similarly to how the income data from the non-imputed data set was distributed, with a slightly higher proportion of respondents placed in the lowest income category, and slightly lower proportions placed in the rest. As those with lowest levels of income are more likely to

avoid reporting their income levels, the comparison between the original data set and the twenty imputed data sets indicates a successful imputation.

Because all other variables had less than three percent missing data, their missing cases after the imputation of the income variable were dealt with through listwise deletion. The final analytical sample had 8,876 cases retained from the original 9,561. This corresponds with 7.2 percent of the original sample missing. The success of the annual personal income variable imputation, the fact that all other variables had less than three percent missing data, and the fact that over 90 percent of this study's original sample was retained, lead me to positively evaluate the extent to which my final analytical sample is representative of the original sample of 9,561 respondents.

The analysis of the first research question also utilizes general state of health as an independent variable. Fair/poor general health serves as the reference category against which good general health is compared. The analysis of the second research question also utilizes return to work as an independent variable. Not having returned to work serves as the reference category against which having returned to work is compared.

### **3.7. Analysis Strategy**

Data analysis began with a descriptive table showing how three categories of individuals from 65 to 74 years of age, those who retired and did not return to work, those who retired and did return to work, and those who have yet to retire, differ according to gender, marital status, current age, age at retirement (only for those who have retired), level of education, annual personal income, general state of health, life satisfaction, and general state of mental health. This served to establish whether these three groups of 65 to 74 year old survey respondents constitute demographically distinct groups of older Canadians. This age bracket was chosen for this analysis because it is within one decade of the normative retirement age, 65 years. It is thus effective for distinguishing between individuals who retired earlier than or at a regular retirement age and those proceeding with their career employment for a substantial amount of time beyond the normative retirement age. Finding substantial differences between those who

have engaged in bridge employment and those who have yet to retire despite having reached the typical age at retirement provides a rationale for studying those who have been involved in bridge employment as a distinct group of older workers.

The investigation of both research questions made use of chi-square tests for independence. When two variables are cross-tabulated, the chi-square score helps establish whether the two variables are significantly associated with one another. If the likelihood of the location of a case within any of the categories of one of the two variables is significantly influenced by its location within the categories of the other variable, then it is deemed that there is a statistically significant relationship between the two variables. The chi-square score derived from the testing of a bivariate cross-tabulation is used to establish whether this statistical significance is achieved. More information concerning the chi-square test for independence can be found in Agresti and Finlay (2009).

In the investigation of the first research question, cross-tabulations of return to work with each of the six main independent variables and with general state of health were subjected to chi-square tests for independence. In the investigation of the second research question, cross-tabulations of return to work and the six main independent variables with each of the three health/well-being outcomes were examined through the use of chi-square tests for independence. These tests of bivariate associations in addressing both research questions were followed by more complex multivariate logistic regression analyses, among whose aims were to determine if earlier significant bivariate associations remain significant when other variables are controlled.

The main statistical analyses of the present study were based on multivariate logistic regressions. Very basically, in regression analysis, a set of independent variables are conceptualized as causes or predictors that lead to, or at least predict, changes in dependent variables, conceptualized as effects or outcomes. In ordinary least squares (OLS) regression analysis, dependent variables are continuous outcomes, meaning that they can take on an infinite number of possible values within a numerical range. In logistic regression analysis, dependent variables are binary categorical outcomes, meaning that cases can fall into one of two possible categories, one coded as the outcome

being modelled, the other coded as the reference category. An OLS or a logistic regression analysis that involves two or more independent variables is designated as a “multivariate” regression analysis. In both types of regression analysis (OLS and logistic), categorical independent variables are coded as a set of categories in which one category is designated as the reference category against which each of the remaining categories, designated as “dummy” variables, is compared. When there are three or more independent variable categories, it is desirable for the reference category to be composed of a relatively large number of respondents. This adds statistical power to the comparisons between the dummy variables and the reference category. It is also beneficial when dealing with an ordinal, or rank-ordered, set of independent variable categories for one of the two variables at either end of the spectrum to be designated as the reference category. This facilitates the process of making comparisons with the dummy variables. In the output of a regression analysis, the coefficient, or odds ratio (only in logistic regression analysis), associated with each independent variable (in the case of a categorical independent variable, there will be a coefficient or odds ratio for each dummy variable category) is a measure of how that independent variable is associated with the dependent variable when the influence of every other independent variable in the equation is controlled, or held constant. This helps test whether an apparent relationship between an independent variable and a dependent variable is, in fact, a spurious relationship that is based on a third confounding variable that is influencing both the independent and dependent variables. A more extensive discussion of OLS and logistic regression analysis can be found in Gordon (2010).

All of the GSS-21 variables utilized as outcomes in the present study are categorical in nature. Furthermore, the categories of each of these variables can be divided into two theoretically and qualitatively distinct groups. Therefore, logistic regression analysis was chosen as the main statistical technique in the present study.

Odds ratios were a central outcome of the logistic regression equations investigated because they provide an effective measure of how an independent variable category, in comparison with its reference category, influences the likelihood that a

respondent is placed within the modelled dependent variable category instead of the reference dependent variable category.

### **3.7.1. Multivariate Logistic Regression Model for the First Research Question**

A multivariate logistic regression analysis was performed in which all six main independent variables, general state of health, and three sets of interactions among the main independent variables, served to predict whether an individual has returned to work after a first retirement. The interactions included in the equation are between gender and marital status, gender and current age, and gender and age at retirement. This final model was built through the technique of “backward elimination,” explained in Agresti and Finlay (2009). In the present study, backward elimination involved placing all predictors being considered in the model and step-by-step deleting the predictor of least statistical significance until all remaining predictors made a noteworthy contribution to the prediction of the outcome.

### **3.7.2. Multivariate Logistic Regression Model for the Second Research Question**

The six main independent variables, with the addition of the return to work variable and of interactions between return to work and current age, and between return to work and age at retirement were used to predict good general health, positive life satisfaction, and good general mental health in three more multivariate logistic regression analyses. The focus was on the return to work independent variable and its interactions with current age and age at retirement.

In order to create consistency across the three components involved in answering the second research question, it was necessary to ensure that the same final model would be used in the prediction of all three outcomes. All six main independent variables were included as control variables. Backward elimination was used to determine which interaction terms would be included in the final model. Across the three segments of backward elimination, one for each health/well-being outcome investigated, any

interaction terms producing noteworthy results in the prediction of any of the three outcomes were included in the final model.

In the investigation of both research questions, the statistical output was used to build tables showing the overall odds ratios associated with each cross-section of categories of the two variables involved in all of the interactions tested. This allowed an explicit view of how the interactions are related to the outcomes.

In summary, a set of diverse independent variables and some interactions among them are tested in each multivariate logistic regression analysis used to answer this study's two research questions. This ensures that the statistical results involve the control of some potential confounding third variables. The model specified in addressing the second research question is consistent across the three outcomes in order to study how a uniform set of predictor variables are related to a series of conceptually related outcomes.

The following chapter presents the results obtained through the procedures explained in this chapter.



## Chapter 4

### 4. Results

The results of the statistical analyses of this thesis are presented in two sections, each corresponding with one of the research questions guiding the present study. A preliminary section utilises cross-tabulations to determine if there are substantial demographic differences between older individuals who retire and do not return to work, older individuals who retire and return to work, and older individuals who have reached the normative retirement age and have yet to retire.

#### **4.1 Characteristics of Three Groups of Older Individuals**

The first analysis seeks to determine if there are substantial demographic differences between individuals of 65 to 74 years of age who retire without returning to work, who retire and subsequently return to work, and who have yet to retire despite having reached the normative retirement age of 65 years. Table 1 presents descriptive statistics that reveal that these three groups of older individuals are in fact demographically distinct. I place emphasis on the fact that those who have returned to work after retirement are of higher current age, of higher levels of education, of lower levels of annual personal income, and of less satisfactory general health than those who have yet to retire despite having reached the normative retirement age. It is thus clear that older individuals who have engaged in bridge employment are distinct from those past the normative retirement age who have yet to retire. Therefore, a rationale is provided for studying those who have returned to work after retirement as a distinct class of older worker.

#### **4.2. Factors Associated with Return to Work**

The examination of how gender, marital status, current age, age at first retirement, highest level of education, annual personal income, and general state of health are

**Table 1. Characteristics of Non – Work Returnees, Work Returnees, and Older Workers who have not yet Retired, 2007<sup>1</sup>**

	<u>Non - Work Returnees</u>		<u>Work Returnees</u>		<u>Not Yet Retired</u>	
	<u>N</u>	<u>%<sup>2</sup></u>	<u>N</u>	<u>%<sup>2</sup></u>	<u>N</u>	<u>%<sup>2</sup></u>
<b>Gender</b>						
Man	1,119	41	518	58	240	60
Woman	1,630	59	370	42	162	40
TOTAL	2,749	100	888	100	402	100
<b>Marital Status</b>						
Married or Common-Law	1,581	58	541	61	254	63
Widowed	606	22	147	17	64	16
Separated or Divorced	379	14	152	17	63	16
Single (Never Married)	181	7	48	5	21	5
TOTAL	2,747	100	888	100	402	100
<b>Current Age (in years)</b>						
65-69	1,410	51	515	58	299	74
70-74	1,339	49	373	42	103	26
TOTAL	2,749	100	888	100	402	100

<sup>1</sup> This table is based on respondents aged 65 to 74 years. Missing data is not considered.

<sup>2</sup> These percentages are calculated based on columns. Category percentages might not add up to 100 percent due to rounding.

**Table 1. Characteristics of Non – Work Returnees, Work Returnees, and Older Workers who have not yet Retired, 2007<sup>1</sup>, continued (1)**

	<u>Non - Work Returnees</u>		<u>Work Returnees</u>		<u>Not Yet Retired</u>	
	<u>N</u>	<u>%<sup>2</sup></u>	<u>N</u>	<u>%<sup>2</sup></u>	<u>N</u>	<u>%<sup>2</sup></u>
<b>Age at Retirement (in years)</b>						
Up to 54	542	20	225	25	-	-
55-64	1,607	60	500	57	-	-
65-74	549	20	158	18	-	-
TOTAL	2,698	100	883	100	-	-
<b>Highest Level of Education</b>						
No High School Diploma	1,070	40	195	22	116	29
High School Diploma	1,244	46	426	49	191	48
University Degree	376	14	257	29	94	23
TOTAL	2,690	100	878	100	401	100
<b>Annual Personal Income</b>						
\$0 - \$29,999	1,272	65	306	44	84	29
\$30,000 - \$49,999	426	22	210	30	89	31
\$50,000 - \$79,999	185	9	127	18	66	23
\$80,000+	69	4	49	7	51	18
TOTAL	1,952	100	692	100	290	100

<sup>1</sup> This table is based on respondents aged 65 to 74 years. Missing data is not considered.

<sup>2</sup> These percentages are calculated based on columns. Category percentages might not add up to 100 percent due to rounding.

**Table 1. Characteristics of Non – Work Returnees, Work Returnees, and Older Workers who have not yet Retired, 2007<sup>1</sup>, continued (2)**

	<u>Non - Work Returnees</u>		<u>Work Returnees</u>		<u>Not Yet Retired</u>	
	<u>N</u>	<u>%<sup>2</sup></u>	<u>N</u>	<u>%<sup>2</sup></u>	<u>N</u>	<u>%<sup>2</sup></u>
<b>General State of Health</b>						
Fair/Poor	629	23	117	13	29	7
Good	2,116	77	770	87	373	93
TOTAL	2,745	100	887	100	402	100
<b>Life Satisfaction</b>						
Unsatisfied	271	10	51	6	20	5
Satisfied	2,427	90	824	94	376	95
TOTAL	2,698	100	875	100	396	100
<b>General State of Mental Health</b>						
Fair/Poor	142	5	28	3	7	2
Good	2,599	95	858	97	393	98
TOTAL	2,741	100	886	100	400	100

<sup>1</sup> This table is based on respondents aged 65 to 74 years. Missing data is not considered.

<sup>2</sup> These percentages are calculated based on columns. Category percentages might not add up to 100 percent due to rounding.

associated with post-retirement paid work begins with the set of bivariate cross-tabulations presented in Table 2. The chi-square values of all seven cross-tabulations are significant at the 0.001 level, and so it is evident that those who have returned to work after retirement differ in numerous respects from those who have not. These cross-tabulations are based on the final analytical sample of 8,876 respondents examined in the present study. This analytical sample was established after a large amount of missing income data was imputed, and it is the analytical sample used in the main statistical analyses in this thesis. While 2,400 respondents within this analytical sample have returned to work after a first retirement, 6,476 have not.

**Table 2. Bivariate Analysis: Return to Work by Demographic Variables, 2007**

	<u>Work Returnees</u>		<u>Non – Work Returnees</u>		<u>Total</u>
	<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>	
<b>Gender</b>					
Man	1,324	34	2,541	66	3,865
Woman	1,076	21	3,935	79	5,011
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 180.74$ , d.f. = 1, p = 0.000

**Marital Status**

Married or Common-Law	1,538	31	3,433	69	4,971
Widowed	371	17	1,825	83	2,196
Separated or Divorced	347	30	796	70	1,143
Single (Never Married)	144	25	422	75	566
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 160.01$ , d.f. = 3, p = 0.000

**Current Age (in years)**

50 – 59	500	43	673	57	1,173
60 – 69	1,082	31	2,412	69	3,494
70+	818	19	3,391	81	4,209
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 295.16$ , d.f. = 2, p = 0.000

<sup>1</sup> These percentages are calculated based on rows.

**Table 2. Bivariate Analysis: Return to Work by Demographic Variables, 2007, continued**

	<u>Work Returnees</u>		<u>Non – Work Returnees</u>		<u>Total</u>
	<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>	
<b>Age at Retirement (in years)</b>					
Up to 54	897	35	1,685	65	2,582
55 – 64	1,207	25	3,541	75	4,748
65+	296	19	1,250	81	1,546
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 132.75$ , d.f. = 2, p = 0.000

**Highest Level of Education**

No High School Diploma	448	16	2,332	84	2,780
High School Diploma	1,215	28	3,102	72	4,317
University Degree	737	41	1,042	59	1,779
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 357.53$ , d.f. = 2, p = 0.000

**Annual Personal Income<sup>2</sup>**

\$0 - \$29,999	998	20	4,014	80	5,012
\$30,000 - \$49,999	719	31	1,564	69	2,283
\$50,000 - \$79,999	461	41	663	59	1,124
\$80,000+	222	49	235	51	457
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 370.74$ , d.f. = 3, p = 0.000

**General State of Health**

Fair/Poor	304	17	1,484	83	1,788
Good	2,096	30	4,992	70	7,088
TOTAL	2,400	27	6,476	73	8,876

$\chi^2 = 114.34$ , d.f. = 1, p = 0.000

<sup>1</sup> These percentages are calculated based on rows.

<sup>2</sup> The following is based on the third out of a total of twenty imputed data sets.

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Men are more likely to have returned to work after retirement than are women (34% versus 21%). Those who are married or in a common-law relationship (31%), and those who are separated or divorced (30%), are more likely than are the widowed (17%)

and the single (never married, 25%) to have engaged in bridge employment. Those of younger current age and those of younger age at retirement are more likely to have returned to work after retirement. Whereas 43 percent of those aged 50 to 59 years have engaged in paid work after retirement, only 19 percent of those aged 70 years and older have done so. While 35 percent of those who retired before the age of 55 years have returned to work after retirement, only 19 percent of those who retired at the age of 65 years and older have done so. Those who are more educated and those who currently earn a higher annual personal income are more likely to have engaged in bridge employment. Forty one percent of those holding a university degree have returned to work after retirement. Only 16 percent of those without a high school diploma have engaged in bridge employment. The cross-tabulation using the third out of a total of twenty imputed data sets shows that 49 percent of those currently earning \$80,000 and higher in annual personal income have engaged in bridge employment. This same cross-tabulation shows that only 20 percent of those earning less than \$30,000 a year have returned to work after their first retirement. While 30 percent of those in good health have returned to work after retirement, 17 percent of those in fair or poor health have engaged in bridge employment.

These bivariate results suggest the need for a multivariate logistic regression model to test if these relationships maintain statistical significance after each of these seven independent variables serves as a control variable in testing the other six. For theoretical reasons explained in Chapter 2, it was deemed beneficial in this exploratory analysis to include interactions between gender and marital status, gender and current age, and gender and age at retirement, all of which produced statistically significant results. Furthermore, interaction terms between gender and level of education, gender and annual personal income, and level of education and annual personal income were tested. The former two were tested because even in contemporary times, societal gender biases lead to the achievements and credentials of men and women receiving different levels of recognition and respect (Rashotte and Webster, Jr. 2005; Ridgeway 2001). I therefore thought it plausible that the associations between level of education and involvement in bridge employment, and between annual personal income and involvement in bridge employment, might be moderated by gender. In light of the studies mentioned in Chapter 2 that emphasize how measures of socioeconomic status are relevant to work in later life

(Cahill et al. 2006; Caputo 2006; Davis 2003; Griffin and Hesketh 2008; Kim and Feldman 2000; Lefebvre et al. 2011; Maestas 2010; Raymo et al. 2010; Statistics Canada 2006; Weckerle and Shultz 1999), I was interested in testing if two central measures of socioeconomic status, level of education and annual personal income, might interact in their association with the likelihood of having engaged in post-retirement work. Using the backward elimination model building technique, the latter three sets of interaction terms were deemed not to make noteworthy contributions to the model and were thus eliminated from the analysis.

Table 3 presents the outcomes of two multivariate logistic regression models: the first containing the six main independent variables and general state of health, the second including the addition of interactions terms between gender and marital status, gender and current age, and gender and age at retirement. Only the interaction model will be discussed. The model containing only the main effects is included for the reader's information. The interaction model is a better fit to the data as all three interactions achieve statistical significance.

Table 3 shows a substantially increased likelihood of having engaged in bridge employment at higher levels of education, of annual income, and of health. Compared with those who did not graduate from high school, university graduates have a 2.32 to 1 odds of having returned to work after retirement. All income groups have higher odds of having returned to work after retirement than those who earn less than \$30,000 per year. Those earning annual personal incomes of \$80,000 and above have a 1.89 to 1 odds of having returned to work after retirement compared with those earning an annual income of less than \$30,000. Compared with those in fair or poor general health, those in good general health have a 1.70 to 1 odds of having engaged in bridge employment. Thus, the hypotheses concerning how levels of education and how levels of general health are associated with involvement in bridge employment have found support, while that concerning annual personal income and involvement in post-retirement paid work has only found partial support. While I have found that high levels of income are positively associated with having been involved in bridge employment, I have not found that those of low annual personal income show a relatively high likelihood of having been



**Table 3. Logistic Regression Analysis: Return to Work by Various Demographic Variables and Interactions Among Them, 2007 (N = 8,876)**

	<u>Return to Work (Main Effects)</u>		<u>Return to Work (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>Gender</b> (ref. = Man)				
Woman	-0.56	0.57***	-1.38	0.25***
<b>Marital Status</b> (ref. = M or CL)				
Widowed	-0.27	0.76***	-0.35	0.70**
Separated or Divorced	0.15	1.17*	-0.03	0.97
Single (Never Married)	-0.24	0.79*	-0.61	0.54***
<b>Current Age</b> , in years (ref. = 70+)				
60 – 69	0.35	1.43***	0.15	1.16^
50 – 59	0.55	1.73***	0.14	1.15
<b>Age at Retirement</b> , in years (ref. = up to 54)				
55 – 64	-0.50	0.61***	-0.79	0.46***
65+	-0.62	0.54***	-1.09	0.34***
<b>Highest Level of Education</b> (ref. = < HS)				
High School Diploma	0.49	1.64***	0.50	1.64***
University Degree	0.83	2.3***	0.84	2.32***
<b>Annual Personal Income</b> (ref. = 0 - \$29,999)				
\$30,000 - \$49,999	0.30	1.35***	0.28	1.32***
\$50,000 - \$79,999	0.54	1.71***	0.52	1.67***
\$80,000+	0.63	1.88***	0.64	1.89***

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table 3. Logistic Regression Analysis: Return to Work by Various Demographic Variables and Interactions Among Them, 2007 (N = 8,876), continued**

	<u>Return to Work (Main Effects)</u>		<u>Return to Work (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>General State of Health</b> (ref. = Fair/Poor)				
Good	0.53	1.70***	0.53	1.70***
<b>Gender * Marital Status</b>				
Woman and Widowed	-	-	0.22	1.25
Woman and Separated or Divorced	-	-	0.35	1.41*
Woman and Single (Never Married)	-	-	0.70	2.02***
<b>Gender * Current Age</b> (in years)				
Woman and 60 – 69	-	-	0.42	1.53***
Woman and 50 – 59	-	-	0.79	2.21***
<b>Gender * Age at Retirement</b> (in years)				
Woman and 55 – 64	-	-	0.45	1.56***
Woman and 65+	-	-	0.83	2.29***

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

involved in post-retirement work as a means of satisfying financial needs. This incomplete support could be due to the fact that return to work after retirement itself could be a cause of higher current levels of annual personal income.

Turning next to the interaction terms that achieved statistical significance. To better understand the relationships involved, the net effects of the interactions were calculated and tabulated in Table 4. Regardless of marital status, men are more likely than women to have returned to work after retirement. Men who are widowed or single (never married) are less likely than those who are married or in common-law relationships, and less likely than those who are separated or divorced, to have returned to paid work after retirement. Among women, the effect of marital status on return to work seems less variable and plays out in slightly different ways. For men, the married or in a common-law union have almost twice the odds of having returned to work compared with the single, but for women, this difference is minimal. Among women, the biggest difference is between the separated/divorced and the widowed, with the former having somewhat higher odds of having returned to work after retirement than the latter.

**Table 4. Return to Work: Predicted Parameter Estimates and Odds Ratios for Interaction Terms, 2007 (N = 8,876)**

**Dependent Variable:** Return to Work

	<b><u>Gender (Parameter Estimates)</u></b>		<b><u>Gender (Odds Ratios)</u></b>	
	<u>Man</u>	<u>Woman</u>	<u>Man</u>	<u>Woman</u>
<b>Marital Status</b>				
Married or Common-Law	0.00	-1.38	1.00	0.25
Widowed	-0.35	-1.51	0.70	0.22
Separated or Divorced	-0.03	-1.06	0.97	0.35
Single (Never Married)	-0.61	-1.29	0.54	0.28
<b>Current Age (in years)</b>				
50 – 59	0.14	-0.45	1.15	0.64
60 – 69	0.15	-0.81	1.16	0.44
70+	0.00	-1.38	1.00	0.25
<b>Age at Retirement (in years)</b>				
Up to 54	0.00	-1.38	1.00	0.25
55 – 64	-0.79	-1.72	0.46	0.18
65+	-1.09	-1.64	0.34	0.19

Table 4 also presents the intersections of gender and categories of current age. Among both genders, lower current age is associated with a higher likelihood that one has returned to work after retirement. Table 4 reveals a pattern in which younger age has a stronger positive association with the likelihood of a woman having returned to paid work after retirement than it is with that of a man. Among men, there is only a slight relationship between current age and having returned to work after retirement. The gap between men and women is greater in the 70 years of age and older category (men: odds ratio (OR) = 1.00, women: OR = 0.25) than it is in the 50 to 59 years of age category (men: OR = 1.15, women: OR = 0.64). My results show that current age is more relevant for women than for men in probability of having returned to work after retirement.

Table 4 also displays the intersections of gender and categories of age at retirement. Across both genders, there is a pattern of a higher age at first retirement being associated with a lower probability that one has returned to work after one's first retirement. Table 4 shows that the decrease in likelihood of having engaged in post-retirement work with increasing age at retirement is greater among men than it is among women. Among women, this relationship is very slight. Men who retired before the age of 55 years (OR = 1.00) have a much higher likelihood of having returned to work than men who retired at the age of 65 years and older (OR = 0.34). Women who retired before the age of 55 years (OR = 0.25) are only slightly more likely to have become involved in bridge employment than those who retired at the age of 65 years and older (OR = 0.19). My results show that age at retirement is more relevant for men than for women.

These results were accumulated in an exploratory effort to discover some key variables and interactions between variables that are associated with the likelihood that a retired individual has returned to paid work. I have found much support for the numerous hypotheses presented in Chapter 2. Being a man, being of a relatively young cohort, having retired earlier, having higher levels of education, earning a higher annual personal income, and being in a better state of general health were found to be positively associated with the likelihood that one has returned to paid work after one's first retirement. Men who have never married were found to be less likely to have performed bridge work. Women who are separated or divorced were found to have a higher

likelihood of having returned to paid work after retirement than other women. I furthermore found that younger age has a stronger positive association with the likelihood that a woman has returned to work after retirement, and that older age at first retirement has a stronger negative association with the probability that a man has engaged in bridge employment.

#### **4.3. Association Between Return to Work and Health/Well-Being**

This section elaborates upon results that show how return to work after retirement is associated with one's general state of physical and of mental health, and with one's satisfaction with one's quality of life as a whole. Table 5 presents cross-tabulations of return to work after retirement and each of the six main independent variables with these three measures of health/well-being. This discussion will focus on the cross-tabulations involving return to work after retirement. The rest are included for the reader's information. It should be noted that all cross-tabulations achieved statistical significance, with the exception that gender is not significantly associated with general state of health or with life satisfaction. This shows that, in general, the main independent variables are significantly associated with the health and well-being of older Canadians.

Table 5 shows that while 87 percent of work returnees report good health, only 77 percent of those who have not returned to paid work after retirement make this same report. While 97 percent of work returnees report good mental health, 94 percent of those who have not returned to paid work post-retirement report a good general state of mental health. With regards to satisfaction with one's quality of life as a whole, 93 percent of individuals who have returned to work report being satisfied, while 90 percent of those who have not returned to paid work report being satisfied. All three cross-tabulations have chi-square scores that achieve significance at the 0.001 level.

These results indicating higher levels of health and well-being among work returnees are followed by multivariate logistic regression analyses that test if these relationships maintain statistical significance after the six main independent variables are included as control variables. Interaction terms between return to paid work and current

**Table 5. Bivariate Analysis: Measures of Health/Well-Being by Return to Work and Demographic Variables, 2007**

	<u>General State of Health</u>					<u>Life Satisfaction</u>					<u>General State of Mental Health</u>				
	<u>Good</u>		<u>Fair/Poor</u>		<u>Total</u>	<u>Satisfied</u>		<u>Unsatisfied</u>		<u>Total</u>	<u>Good</u>		<u>Fair/Poor</u>		<u>Total</u>
	<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>		<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>		<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>	
<b>Return to Work</b>															
Yes	2,096	87	304	13	2,400	2,242	93	158	7	2,400	2,322	97	78	3	2,400
No	4,992	77	1,484	23	6,476	5,806	90	670	10	6,476	6,092	94	384	6	6,476
TOTAL	7,088	80	1,788	20	8,876	8,048	91	828	9	8,876	8,414	95	462	5	8,876
	$\chi^2 = 114.34, \text{ d.f.} = 1, \text{ p} = 0.000$					$\chi^2 = 29.31, \text{ d.f.} = 1, \text{ p} = 0.000$					$\chi^2 = 25.48, \text{ d.f.} = 1, \text{ p} = 0.000$				
<b>Gender</b>															
Man	3,059	79	806	21	3,865	3,487	90	378	10	3,865	3,627	94	238	6	3,865
Woman	4,029	80	982	20	5,011	4,561	91	450	9	5,011	4,787	96	224	4	5,011
TOTAL	7,088	80	1,788	20	8,876	8,048	91	828	9	8,876	8,414	95	462	5	8,876
	$\chi^2 = 2.14, \text{ d.f.} = 1, \text{ p} = 0.143$					$\chi^2 = 1.65, \text{ d.f.} = 1, \text{ p} = 0.199$					$\chi^2 = 12.60, \text{ d.f.} = 1, \text{ p} = 0.000$				
<b>Marital Status</b>															
Married or Common-Law	4,070	82	901	18	4,971	4,624	93	347	7	4,971	4,738	95	233	5	4,971
Widowed	1,693	77	503	23	2,196	1,949	89	247	11	2,196	2,076	95	120	5	2,196
Separated or Divorced	876	77	267	23	1,143	980	86	163	14	1,143	1,072	94	71	6	1,143
Single (Never Married)	449	79	117	21	566	495	87	71	13	566	528	93	38	7	566
TOTAL	7,088	80	1,788	20	8,876	8,048	91	828	9	8,876	8,414	95	462	5	8,876
	$\chi^2 = 30.45, \text{ d.f.} = 3, \text{ p} = 0.000$					$\chi^2 = 81.76, \text{ d.f.} = 3, \text{ p} = 0.000$					$\chi^2 = 7.96, \text{ d.f.} = 3, \text{ p} = 0.047$				

<sup>1</sup> These percentages are calculated based on rows.

**Table 5. Bivariate Analysis: Measures of Health/Well-Being by Return to Work and Demographic Variables, 2007<sup>1</sup>, continued (1)**

	<u>General State of Health</u>					<u>Life Satisfaction</u>					<u>General State of Mental Health</u>				
	<u>Good</u>		<u>Fair/Poor</u>		<u>Total</u>	<u>Satisfied</u>		<u>Unsatisfied</u>		<u>Total</u>	<u>Good</u>		<u>Fair/Poor</u>		<u>Total</u>
	<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>		<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>		<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>	
<b>Current Age (in years)</b>															
50 – 59	998	85	175	15	1,173	1,078	92	95	8	1,173	1,104	94	69	6	1,173
60 – 69	2,917	83	577	17	3,494	3,212	92	282	8	3,494	3,375	97	119	3	3,494
70+	3,173	75	1,036	25	4,209	3,758	89	451	11	4,209	3,935	93	274	7	4,209
TOTAL	7,088	80	1,788	20	8,876	8,048	91	828	9	8,876	8,414	95	462	5	8,876
	$\chi^2 = 100.81, d.f. = 2, p = 0.000$					$\chi^2 = 18.20, d.f. = 2, p = 0.000$					$\chi^2 = 38.54, d.f. = 2, p = 0.000$				
<b>Age at Retirement (in years)</b>															
Up to 54	2,016	78	566	22	2,582	2,334	90	248	10	2,582	2,432	94	150	6	2,582
55 – 64	3,882	82	866	18	4,748	4,336	91	412	9	4,748	4,543	96	205	4	4,748
65+	1,190	77	356	23	1,546	1,378	89	168	11	1,546	1,439	93	107	7	1,546
TOTAL	7,088	80	1,788	20	8,876	8,048	91	828	9	8,876	8,414	95	462	5	8,876
	$\chi^2 = 23.77, d.f. = 2, p = 0.000$					$\chi^2 = 6.94, d.f. = 2, p = 0.031$					$\chi^2 = 18.72, d.f. = 2, p = 0.000$				
<b>Highest Level of Education</b>															
No High School Diploma	1,978	71	802	29	2,780	2,436	88	344	12	2,780	2,567	92	213	8	2,780
High School Diploma	3,529	82	788	18	4,317	3,937	91	380	9	4,317	4,120	95	197	5	4,317
University Degree	1,581	89	198	11	1,779	1,675	94	104	6	1,779	1,727	97	52	3	1,779
TOTAL	7,088	80	1,788	20	8,876	8,048	91	828	9	8,876	8,414	95	462	5	8,876
	$\chi^2 = 230.41, d.f. = 2, p = 0.000$					$\chi^2 = 57.41, d.f. = 2, p = 0.000$					$\chi^2 = 56.39, d.f. = 2, p = 0.000$				

<sup>1</sup> These percentages are calculated based on rows.

**Table 5. Bivariate Analysis: Measures of Health/Well-Being by Return to Work and Demographic Variables, 2007<sup>1</sup>, continued (2)**

	<u>General State of Health</u>					<u>Life Satisfaction</u>					<u>General State of Mental Health</u>				
	<u>Good</u>		<u>Fair/Poor</u>		<u>Total</u>	<u>Satisfied</u>		<u>Unsatisfied</u>		<u>Total</u>	<u>Good</u>		<u>Fair/Poor</u>		<u>Total</u>
	<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>		<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>		<u>N</u>	<u>%<sup>1</sup></u>	<u>N</u>	<u>%<sup>1</sup></u>	
<b>Annual Personal Income<sup>2</sup></b>															
\$0 - \$29,999	3,781	75	1,231	25	5,012	4,441	89	571	11	5,012	4,685	93	327	7	5,012
\$30,000 - \$49,999	1,926	84	357	16	2,283	2,125	93	158	7	2,283	2,203	96	80	4	2,283
\$50,000 - \$79,999	974	87	150	13	1,124	1,051	94	73	6	1,124	1,081	96	43	4	1,124
\$80,000+	407	89	50	11	457	431	94	26	6	457	445	97	12	3	457
<b>TOTAL</b>	<b>7,088</b>	<b>80</b>	<b>1,788</b>	<b>20</b>	<b>8,876</b>	<b>8,048</b>	<b>91</b>	<b>828</b>	<b>9</b>	<b>8,876</b>	<b>8,414</b>	<b>95</b>	<b>462</b>	<b>5</b>	<b>8,876</b>
	$\chi^2 = 145.97, \text{ d.f.} = 3, \text{ p} = 0.000$					$\chi^2 = 58.72, \text{ d.f.} = 3, \text{ p} = 0.000$					$\chi^2 = 41.56, \text{ d.f.} = 3, \text{ p} = 0.000$				

<sup>1</sup> These percentages are calculated based on rows.

<sup>2</sup> The following is based on the third out of a total of twenty imputed data sets.



age, and between return to paid work and age at retirement, are also tested because this can shed light on whether the associations between return to work and health/well-being are contingent on the age at which one has returned to work after one's first retirement.

Furthermore, I tested the interaction between gender and return to work on the basis of the fact that persistent gender biases in the workplace systematically devalue the performance of women workers and serve to limit the influence and status they achieve (Rashotte and Webster, Jr. 2005; Ridgeway 2001). Because of this differential treatment, it is reasonable to postulate that the association between post-retirement work and health/well-being might be moderated by gender. Using the backward elimination model building technique, this interaction was not found to produce noteworthy results in the prediction of any of the three health/well-being outcomes examined and was thus eliminated from the analysis.

Tables 6, 8, and 10 display the outcomes of the multivariate logistic regression analyses used to address the question of how bridge employment is associated with health and well-being. The focus here will be on tables 7, 9, and 11 that present the net effects of the interactions included in each of the three multivariate logistic regression analyses.

Table 7 shows that across the categories of current age and age at retirement, those who have returned to work report better general health. We see that at younger current ages, having returned to work has a somewhat stronger association with good general health. In the age category of 70 years and older, work returnees have an OR of 1.56, while those who have not returned to work have an OR of 1.00. In the age category of 50 to 59 years, the difference between the two groups is substantially greater. Those who have returned to work have an OR of 3.42, while those who have not returned to work have an OR of 1.42. Table 7 shows no significant interaction between having returned to paid work and age at retirement in the estimation of the likelihood of being in good general health.

Table 9 presents how satisfaction with one's life as a whole is associated with the intersections of return to work and both age variables. Across the levels of both age variables, having returned to work after retirement is generally associated with higher

**Table 6. Logistic Regression Analysis: General State of Health by Return to Work, Demographic Variables, and Interactions Among Them, 2007 (N = 8,876)**

	<u>General Health (Main Effects)</u>		<u>General Health (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>Return to Work</b> (ref. = did not return)	0.54	1.72***	0.44	1.56**
<b>Gender</b> (ref. = Man)				
Woman	0.35	1.42***	0.35	1.42***
<b>Marital Status</b> (ref. = M or CL)				
Widowed	-0.08	0.92	-0.09	0.92
Separated or Divorced	-0.36	0.70***	-0.36	0.70***
Single (Never Married)	-0.22	0.80^	-0.22	0.80^
<b>Current Age</b> , in years (ref. = 70+)				
60 – 69	0.41	1.50***	0.39	1.47***
50 – 59	0.47	1.60***	0.35	1.42**
<b>Age at Retirement</b> , in years (ref. = up to 54)				
55 – 64	0.39	1.48***	0.39	1.48***
65+	0.35	1.41***	0.36	1.43***
<b>Highest Level of Education</b> (ref. = < HS)				
High School Diploma	0.38	1.46***	0.38	1.47***
University Degree	0.73	2.07***	0.73	2.08***

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table 6. Logistic Regression Analysis: General State of Health by Return to Work, Demographic Variables, and Interactions Among Them, 2007 (N = 8,876), continued**

	<u>General Health (Main Effects)</u>		<u>General Health (with Interactions)</u>	
	Parameter Estimate	Odds Ratio	Parameter Estimate	Odds Ratio
<b>Annual Personal Income</b> (ref. = 0 - \$29,999)				
\$30,000 - \$49,999	0.47	1.60***	0.47	1.59***
\$50,000 - \$79,999	0.48	1.61***	0.47	1.60***
\$80,000+	0.63	1.88***	0.62	1.85***
<b>Return to Work * Current Age</b> (in years)				
Return to Work * 60 – 69	-	-	0.12	1.13
Return to Work * 50 – 59	-	-	0.44	1.55^
<b>Return to Work * Age at Retirement</b> (in years)				
Return to Work * 55 – 64	-	-	0.01	1.01
Return to Work * 65+	-	-	-0.10	0.90

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table 7. General State of Health: Predicted Parameter Estimates and Odds Ratios for Interaction Terms, 2007 (N = 8,876)**

**Dependent Variable:** General State of Health

	<u>Return to Work (Parameter Estimates)</u>		<u>Return to Work (Odds Ratios)</u>	
	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>
<b>Current Age (in years)</b>				
50 – 59	0.35	1.23	1.42	3.42
60 – 69	0.39	0.95	1.47	2.59
70+	0.00	0.44	1.00	1.56
<b>Age at Retirement (in years)</b>				
Up to 54	0.00	0.44	1.00	1.56
55 – 64	0.39	0.84	1.48	2.32
65+	0.36	0.70	1.43	2.01

levels of life satisfaction. However, with higher age at retirement, the positive association between having returned to work and life satisfaction becomes weaker. Within the category of those who have retired before the age of 55 years, work returnees have an OR of 1.79, while those who have not returned to work have an OR of 1.00. In the category of those who first retired between the ages of 55 and 64 years, work returnees have an OR of 1.62, while those who have not returned to work have an OR of 1.30. Among those who have first retired at the age of 65 years and older, those who have not returned to work have a slightly higher OR (1.27) than those who have returned to the paid workforce (OR = 1.21). This indicates that among those who have retired at or past the age of 65 years, having returned to work is associated with a slightly lower level of satisfaction with one's life as a whole. Table 8 does not show any significant interaction between having returned to work post-retirement and current age in the estimation of the likelihood of having a positive level of life satisfaction.

Table 11 shows that across the categories of current age and of age at retirement, those who have returned to work after retirement show higher levels of general mental health. No significant interaction is displayed between having returned to work and either

**Table 8. Logistic Regression Analysis: Life Satisfaction by Return to Work, Demographic Variables, and Interactions Among Them, 2007 (N = 8,876)**

	<u>Life Satisfaction (Main Effects)</u>		<u>Life Satisfaction (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>Return to Work</b> (ref. = did not return)	0.35	1.43***	0.58	1.78**
<b>Gender</b> (ref. = Man)				
Woman	0.39	1.48***	0.39	1.48***
<b>Marital Status</b> (ref. = M or CL)				
Widowed	-0.47	0.62***	-0.48	0.62***
Separated or Divorced	-0.83	0.44***	-0.83	0.43***
Single (Never Married)	-0.71	0.49***	-0.72	0.49***
<b>Current Age</b> , in years (ref. = 70+)				
60 – 69	0.18	1.20*	0.16	1.18^
50 – 59	0.06	1.07	0.03	1.03
<b>Age at Retirement</b> , in years (ref. = up to 54)				
55 – 64	0.18	1.20*	0.26	1.30**
65+	0.12	1.13	0.24	1.27^
<b>Highest Level of Education</b> (ref. = < HS)				
High School Diploma	0.21	1.24*	0.22	1.24**
University Degree	0.48	1.61***	0.48	1.62***

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table 8. Logistic Regression Analysis: Life Satisfaction by Return to Work, Demographic Variables, and Interactions Among Them, 2007 (N = 8,876), continued**

	<u>Life Satisfaction (Main Effects)</u>		<u>Life Satisfaction (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>Annual Personal Income</b> (ref. = 0 - \$29,999)				
\$30,000 - \$49,999	0.44	1.55***	0.44	1.55***
\$50,000 - \$79,999	0.50	1.66**	0.49	1.64**
\$80,000+	0.34	1.40	0.33	1.39
<b>Return to Work * Current Age</b> (in years)				
Return to Work * 60 – 69	-	-	0.11	1.11
Return to Work * 50 – 59	-	-	0.10	1.11
<b>Return to Work * Age at Retirement</b> (in years)				
Return to Work * 55 – 64	-	-	-0.36	0.70
Return to Work * 65+	-	-	-0.63	0.53*

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table 9. Life Satisfaction: Predicted Parameter Estimates and Odds Ratios for Interaction Terms, 2007 (N = 8,876)**

**Dependent Variable:** Life Satisfaction

	<u>Return to Work (Parameter Estimates)</u>		<u>Return to Work (Odds Ratios)</u>	
	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>
<b>Current Age</b> (in years)				
50 – 59	0.03	0.71	1.03	2.03
60 – 69	0.16	0.85	1.18	2.34
70+	0.00	0.58	1.00	1.78
<b>Age at Retirement</b> (in years)				
Up to 54	0.00	0.58	1.00	1.78
55 – 64	0.26	0.48	1.30	1.62
65+	0.24	0.19	1.27	1.21

current age or age at retirement in the estimation of the probability that one is in a state of good general mental health.

These outcomes reveal that the associations between return to work and these three health/well-being outcomes remain statistically significant after the inclusion of a set of control variables. It should be noted that in the case of life satisfaction, this association is significantly moderated by age at retirement, and that in the case of general state of health, this association approaches being significantly moderated by current age. Thus, the age at which one has returned to work after retirement might play an important role in the association between this return and levels of health and well-being.

I have thus found much support for the hypotheses presented in Chapter 2 concerning how post-retirement paid work is associated with health and well-being. Having returned to work was found to be significantly positively associated with all three health/well-being outcomes. I have found the positive association between having

**Table 10. Logistic Regression Analysis: General State of Mental Health by Return to Work, Demographic Variables, and Interactions Among Them, 2007 (N = 8,876)**

	<u>General Mental Health (Main Effects)</u>		<u>General Mental Health (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>Return to Work</b> (ref. = did not return)	0.52	1.68***	0.73	2.08*
<b>Gender</b> (ref. = Man)				
Woman	0.58	1.79***	0.59	1.80***
<b>Marital Status</b> (ref. = M or CL)				
Widowed	-0.06	0.94	-0.06	0.94
Separated or Divorced	-0.36	0.70*	-0.36	0.70*
Single (Never Married)	-0.45	0.64*	-0.45	0.64*
<b>Current Age</b> , in years (ref. = 70+)				
60 – 69	0.56	1.76***	0.63	1.88***
50 – 59	-0.11	0.90	-0.15	0.86
<b>Age at Retirement</b> , in years (ref. = up to 54)				
55 – 64	0.37	1.44**	0.39	1.47**
65+	0.09	1.10	0.15	1.16
<b>Highest Level of Education</b> (ref. = < HS)				
High School Diploma	0.36	1.44***	0.37	1.44***
University Degree	0.62	1.86***	0.63	1.87***

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$



**Table 10. Logistic Regression Analysis: General State of Mental Health by Return to Work, Demographic Variables, and Interactions Among Them, 2007 (N = 8,876), continued**

	<u>General Mental Health (Main Effects)</u>		<u>General Mental Health (with Interactions)</u>	
	<u>Parameter Estimate</u>	<u>Odds Ratio</u>	<u>Parameter Estimate</u>	<u>Odds Ratio</u>
<b>Annual Personal Income</b> (ref. = 0 - \$29,999)				
\$30,000 - \$49,999	0.50	1.66***	0.51	1.66***
\$50,000 - \$79,999	0.53	1.71**	0.53	1.69*
\$80,000+	0.65	1.91^	0.64	1.90^
<b>Return to Work * Current Age</b> (in years)				
Return to Work * 60 – 69	-	-	-0.38	0.69
Return to Work * 50 – 59	-	-	0.06	1.06
<b>Return to Work * Age at Retirement</b> (in years)				
Return to Work * 55 – 64	-	-	-0.09	0.91
Return to Work * 65+	-	-	-0.38	0.69

^  $p \leq 0.10$  \*  $p \leq 0.05$  \*\*  $p \leq 0.01$  \*\*\*  $p \leq 0.001$

**Table 11. General State of Mental Health: Predicted Parameter Estimates and Odds Ratios for Interaction Terms, 2007 (N = 8,876)**

**Dependent Variable:** General State of Mental Health

	<u>Return to Work (Parameter Estimates)</u>		<u>Return to Work (Odds Ratios)</u>	
	<u>No</u>	<u>Yes</u>	<u>No</u>	<u>Yes</u>
<b>Current Age</b> (in years)				
50 – 59	-0.15	0.64	0.86	1.90
60 – 69	0.63	0.98	1.88	2.66
70+	0.00	0.73	1.00	2.08
<b>Age at Retirement</b> (in years)				
Up to 54	0.00	0.73	1.00	2.08
55 – 64	0.39	1.03	1.47	2.80
65+	0.15	0.50	1.16	1.65

returned to work and general health to be somewhat stronger among the younger segments of the older population, and I have found that among those who retired at the age of 65 years and older, having returned to work is not associated with a higher level of life satisfaction.

The following chapter discusses these results and presents some of their implications for both theory and policy.

## Chapter 5

### 5. Discussion and Conclusion

#### 5.1. Introduction

This study has investigated correlates of return to work after retirement, as well as how post-retirement work is associated with three measures of health and well-being. A central purpose has been to inform efforts aimed at prolonging the typical working life in response to concerns that population aging will lead to labour force shortages. Szinovacz and her colleagues (2001) emphasize that the effectiveness of retirement policies depends on the extent to which retirement choices and behaviours can be predicted. The results of this study will inform policy and programs concerning retirement, pensions, and work in the later years of life. These policies and programs must be structured according to accurate and comprehensive knowledge of what factors lead to a higher probability that an older individual will proceed with labour force activity. A second purpose of this study has been to contribute to knowledge concerning how work in later life is associated with older workers' health and happiness. The design of policies and programs to lengthen the working life can only be deemed just and moral if continued work does not compromise the health and well-being of older individuals.

#### 5.2 Bridge Employees as a Distinct Group of Older Workers

Table 1 included descriptive statistics that were used to examine if bridge employees are a distinct category of older worker. By revealing some notable demographic differences between individuals aged 65 to 74 years who have been involved in bridge employment and older workers within this age range who have yet to retire, Table 1 has provided a rationale for the separate study of bridge employees as a distinct class of older worker. Especially noteworthy is the fact that those who have been involved in bridge employment are of higher levels of education than those who have yet to retire despite having reached the normative retirement age. Because higher levels of education provide skills and contacts that facilitate the finding of paid work and that

make one qualified for many types of jobs, education is likely of great benefit to older individuals seeking bridge employment (Griffin and Hesketh 2008).

### **5.3. Correlates of Return to Work After Retirement**

My results pertaining to the factors that are associated with return to work after retirement replicate some previous research results while contributing new knowledge mostly through the study of a set of interaction terms. All of my hypotheses concerning the independent effects of gender, current age, age at retirement, level of education, annual personal income, and general state of health are supported, with the exception of the hypothesis that those of low income will have a higher rate of return to work after retirement than those in the middle range of income. My results pertaining to annual personal income and likelihood of engagement in bridge employment warrant discussion.

The relationship between current annual personal income and involvement in bridge employment found in the present study contradicts some of the findings of other researchers who have investigated this relationship. While I have found the likelihood of having returned to work after retirement to increase with each level of income, other scholars have found that secure financial circumstances are associated with a lower probability of involvement in post-retirement work (Davis 2003; Kim and Feldman 2000; Weckerle and Shultz 1999). While my results agree with Cahill and his colleagues' (2006) finding that those of high income have a higher likelihood than those of middle income to engage in bridge employment, likely because they are motivated by benefits to their quality of life, my results do not concur with their claim that those of low income are more likely than those of middle income to return to work after retirement because of financial necessity. However, it must be borne in mind that my income variable is a cross-sectional examination of current levels of annual personal income. Causation could work in the reverse direction; post-retirement work itself allows for the earning of income that raises one's current annual income.

In accordance with scholars who have emphasized that the experience of family circumstances differs by gender (Calasanti 2004; Connidis and Willson 2011; Kim and

Feldman 2000; McMullin 2010; McPherson 1990; Murray et al. 2011; Pleau 2010; Szinovacz and DeViney 2000; Szinovacz et al. 2001; Teevan 2011), I have found through my interaction terms that marital status makes a somewhat larger difference for the return of retired men to the labour force than it does for the return of retired women to paid employment. I have confirmed my hypothesis that single (never married) men are much less likely than are men who have married to have engaged in bridge employment. This outcome could be explained by the persistent gendered norms according to which men hold financial responsibility for the family while women must be concerned with homecare, with the care of children, and with the family's emotional needs (Calasanti 2004; Connidis and Willson 2011; McMullin 2010; Murray et al. 2011; Teevan 2011). Even after children have reached adulthood and have begun their independent lives, fathers might maintain their obligation to aid their children financially, at least in case an unexpected need develops. Data from the GSS-21 confirms that men who have never married are much less likely to have children (statistics not shown) for whom they are financially concerned, and so this provides an explanation for why they are less likely to have engaged in post-retirement work than are men in other marital status categories who are more likely to have raised children.

Furthermore, my results show widowhood to have a somewhat stronger negative association with the probability that a man has returned to work after retirement than with the likelihood that a woman has engaged in bridge employment. Some research gives reason to believe that widowhood has a greater depressing effect on men than on women (Lee, Willets, and Seccombe 1998; Umberson, Wortman, and Kessler 1992). Other research argues that depression can serve as a barrier to the motivation necessary to perform paid labour (Lerner et al. 2004). In combination, this research provides a reason why widowhood might do more to inhibit work activity among men.

Research concerning dynamics of status and power within marriages provides a reason for why I have not found separated and divorced men, who are likely to experience a greater social need for bridge employment, to be more likely than their married counterparts to have returned to work after retirement. Szinovacz and DeViney (2000) elaborate on how a husband's desire to maintain his authority within his marriage

could incline him to proceed with paid labour beyond what is financially necessary. The social pull to bridge employment experienced by men who are separated or divorced might be matched by the push towards bridge employment experienced by married men who fear that labour force exit might cause them to lose status within their marriage.

My results show a substantial difference in likelihood of having returned to work after retirement between women who are separated or divorced and women who are widowed. The former have a higher probability of having been involved in bridge employment than the latter. The fact that separated and divorced women were found to have a higher likelihood of having engaged in post-retirement work than women in other marital status categories confirms my hypothesis. While not finding support for his hypothesis that early retirees who are not married have a higher likelihood of becoming involved in bridge employment than their married counterparts, Davis (2003) explains that some scholars have suggested that this proposition is in fact true because married individuals receive from their spouses the companionship they require to replace the social activity they used to enjoy at work. This provides a reason for why separated and divorced retired women are more likely than other retired women to return to paid work. Another reason why divorced and separated women might seek paid work after retirement is because marital separation often leaves women in difficult financial circumstances (Connidis and Willson 2011; Teevan 2011). For some separated and divorced women, responsibilities for the family may have caused them to move in and out of the labour force throughout their early and middle adulthood (Kim and Feldman 2000; Szinovacz and DeViney 2000). As Kim and Feldman (2000:1199) explain, “women may be less likely to have accumulated enough savings and pension benefits to make bridge employment financially unnecessary.” Szinovacz and DeViney (2000) concur that worse financial circumstances can cause women to delay their retirement or to rely financially upon their husbands. The latter option is not available to women who are separated or divorced. The result found in the present study that widowhood is associated with a slight decrease in the probability of a woman having engaged in bridge employment contradicts Pleau (2010) who suggests that widowed women might stay longer in the workforce because of troubled financial circumstances. One possible explanation for the contradictory findings might be that the push towards bridge

employment for widowed women based on financial need is counteracted by the emotional costs of widowhood (Onrust and Cujpers 2006) that limit the motivation to engage in work effort (Lerner et al. 2004).

A noteworthy outcome of my study of the interaction between gender and marital status is that women who have never married only slightly differ in likelihood of having been involved in bridge employment from women who are currently married or in a common-law relationship. Women who have never married are less likely to have had familial responsibilities that have caused them to have erratic work trajectories. GSS-21 data shows that women who have never married are far less likely to have raised children (statistics not shown). This provides an explanation for why single women are known to achieve more than married women in their education and in their careers (Connidis and Willson 2011). While single women might be motivated to return to work for social reasons, their greater financial security often precludes an economic necessity for bridge employment. On the other hand, women who are currently married or in a common-law relationship might avoid an economic necessity for bridge employment through reliance upon the finances of their husbands or partners.

My hypothesis that gender moderates the relationship between current age and probability of engagement in bridge employment, such that younger age has a stronger positive association with the likelihood that a woman has been involved in post-retirement work, has been confirmed. As I expected, younger cohorts of men and women were found to be more similar in their post-retirement work patterns. Recent times have seen convergence in the roles performed by men and women (Teevan 2011), and so it is to be expected that among those of younger current age, being a man or a woman might make less of a difference in one's likelihood of engaging in bridge employment. The contraction of the manufacturing jobs that traditionally have been the domain of men and the expansion of the service jobs that traditionally have been the domain of women in recent times are macroeconomic changes that have contributed to convergence between the genders in rates of post-retirement employment (Pleau 2010; Pleau and Shauman 2013). Furthermore, recent times have seen the expansion of the education of women to the point that the present-day is characterized by more women in university than men

(Murray et al. 2011). As education opens up many opportunities for better jobs within the labour market (Griffin and Hesketh 2008; McNamara and Williamson 2004; Price 2005), higher levels of education for women are a means through which convergence between the genders within the labour force can be achieved. These societal changes provide explanations for why I have found that younger current age has a stronger positive association with the return of women to paid work after retirement.

My results also confirm the hypothesis that a higher age at retirement has a stronger negative association with the likelihood that a man will engage in bridge employment than with that of a woman. Because men have traditionally undergone more stable work trajectories than women (Kim and Feldman 2000; Pleau 2010; Szinovacz and DeViney 2000), later age at retirement for men is likely to result in circumstances of financial safety that preclude the need for bridge employment. The more fragmented work trajectories experienced by women (Kim and Feldman 2000; Pleau 2010; Szinovacz and DeViney 2000) do not allow for as much of a guarantee that a relatively late retirement will provide the financial security that will make post-retirement paid work unnecessary. Older individuals with pension plans often choose to retire at a later age in order to increase the income they will receive from their pension plans after retirement (Friedberg and Webb 2005). These facts provide an explanation for my finding that age at retirement has a stronger negative association with the probability that a man will engage in bridge employment.

#### **5.4. Association of Post-Retirement Paid Work with Levels of Health and Well-Being**

As explained in Chapter 2, research has produced conflicting results on the topic of how paid work and other types of formal activity in the later years are related to levels of health and happiness. This thesis contributes some new results to this previous work through an examination of how bridge employment is related to three distinct measures of health and well-being.



Having returned to work after retirement is found to be generally associated with better health, life satisfaction, and higher levels of happiness among older persons. My hypothesis has thus found support. These outcomes achieve statistical significance within multivariate logistic regression models that include all six of this study's main independent variables as control variables. This helps eliminate the possibility that these outcomes are due to the spurious influences of antecedent third variables.

My interaction terms have also produced noteworthy results. The somewhat stronger association between having returned to post-retirement work and general levels of health among those currently aged 50 to 59 years might be due to the fact that not being involved in paid work at an age at which most individuals are very physically and mentally fit for productive activity could be indicative of a physical health problem.

Also noteworthy, I found that among those who retired after turning 65 years of age, having returned to work is not associated with improved life satisfaction. This suggests that there is perhaps an age limit to the association between return to work after retirement and higher levels of life satisfaction. Perhaps after a certain age, one's physical state is likely to prevent one from gaining personal benefits from continued labour force activity.

My results show no significant interaction between having returned to work post-retirement and current age, or age at retirement, in the estimation of likelihood of being in a state of good general mental health. This suggests that at all ages, post-retirement work is associated with higher levels of mental health.

This disjuncture between my results pertaining to general mental health and life satisfaction could be due to the fact that the former is more relevant to whether one is in proper constitution to engage in paid work. The ability to perform paid work is likely dependent on one's mental health. Thus, at all ages of adulthood, it is mainly those with sufficient levels of mental health who will be engaged in paid work. On the other hand, it is easy to conceive of a worker performing his or her work responsibilities well while not being satisfied with his or her work or quality of life as a whole.

The outcomes of these interactions lend some support to my hypothesis that the positive association between post-retirement work and health/well-being is attenuated among those of higher current age and among those of higher age at retirement.

### **5.5. Implications for Theory**

In the first explicit statement of the activity theory of aging, Lemon and his colleagues (1972:521) emphasized the variability that is present within the older population:

...neither activity theory nor disengagement theory by themselves can adequately account for optimal aging. Perhaps it is good to be reminded again of the *variability* of aged individuals in terms of their value systems, personalities, physical and social situations, and the danger of stereotyping or of building theory that is over-generalized.

This statement can be linked with the criticisms of disengagement and activity theory presented in Chapter 2 based on the fact that these two theories falsely assume universality among the older population. In accordance with continuity theory, it might be the case that optimal health and well-being in the later years is accomplished when individuals choose a lifestyle that holds continuity with the type of life they lived when they were younger, and that is therefore well-suited to their personalities, preferences, and abilities. For individuals who were more active earlier in life, high levels of activity might be beneficial. Conversely, those who were less active in their early and middle adulthood might decide that disengagement is the best option. Calvo and his colleagues (2009), in fact, argue that it is freedom to make one's own decisions in retirement that most strongly determines well-being in retirement. These ideas suggest that the continuity theory of aging acknowledges variability and heterogeneity among the elderly to an extent that is not achieved by the disengagement and activity theories of aging.

Individuals are likely to choose a present level of activity and of social engagement that they believe suits them best in the present, and this will differ between individuals both across and within age categories. For every older individual, a confluence of personal characteristics and social circumstances will determine the level

of activity they would like to pursue. Some retired individuals will prefer not to reengage in workforce activity. It is for this reason that Lemon and his colleagues (1972) warned against deciding that all older people must maintain high levels of activity.

The types of jobs open to retired individuals could play an important role in whether they believe continued activity in the form of paid work will be to their benefit or to their detriment. Kohn and Schooler (1982) emphasized that while jobs involving autonomy and complexity foster a character type marked by agency, oppressive jobs lacking in autonomy are a source of psychological distress. This offers an explanation for why both measures of social status here investigated, level of education and annual personal income, are positively associated with having returned to work after retirement.

Continuity theory offers a second reason for the positive association between social status and bridge employment. Highly educated individuals and those who have high incomes in this study's sample likely enjoyed high levels of social status throughout their early and middle adult years. Scholars have linked the reduced status of the elderly that has followed modernization to the fact that the elderly are less able to maintain the productive work that has become a cardinal feature of modern values (Cowgill 1974). Individuals who were of high social status in their early and middle adulthood could be expected to desire to maintain a high level of social status in their later years. Continued labour force activity is thus a means through which they might accomplish this goal.

The results I obtained in addressing the health and well-being implications of bridge employment contradict those of Lemon and his colleagues (1972) and Longino and Kart (1982) who did not find formal activity to benefit life satisfaction. However, it must be borne in mind that the samples they examined were either in-movers to or residents of retirement communities. The formal activities addressed in these two studies were based in voluntary organizations and in group activities involving set goals and plans of action. Both studies argued that role support is the means through which activity leads to life satisfaction. The social experiences involved in the formal activities addressed in these two studies did not provide enough role support for life satisfaction to be higher among those involved in these formal activities.

The paid work examined in the present study is likely a more potent means of maintaining continuity with the roles of one's past. Beyond the social role supports provided at places of work, older workers realize that in remaining a part of the workforce, they remain among the central contributors to their society and providers of financial support for their families. This avoids the damaging drastic role change that often accompanies retirement. The role support implicit in the knowledge that one is involved in paid work might in itself lead to higher levels of life satisfaction, independent of the social activity experienced at work. This idea is concordant with Luoh and Herzog (2002) who argue that the active individuals in their study involved in paid and volunteer work had higher levels of health because of the self-esteem resultant from the knowledge that they are active and competent contributors to their communities. The benefits to health and well-being of work activity in the present study remain statistically significant after income is controlled. This suggests that these benefits find their sources in domains other than those related to financial circumstances, leaving open the possibility that social role maintenance is at the heart of my results, which is what both the activity and continuity theories of aging would predict.

It is also possible that the higher levels of life satisfaction and health among those in the present study who have been involved in bridge employment are due to the reverse causal direction in which high levels of health and happiness lead to return to paid work after retirement. This reverse causal direction was presented in Chapter 2 as a criticism often made of the ideas presented in activity theory. In accordance with some research presented in Chapter 2, the present study's investigation of factors related to post-retirement paid work found general health to be significantly positively associated with bridge employment. My outcomes in addressing the association of bridge employment with health/well-being might therefore be interpreted as another expression of the fact that individuals make their retirement decisions according to what they believe will benefit them most. Those who are happy and healthy likely have the energy levels that will lead them to believe that continued work efforts will improve their lives. Those in the present study who did not return to work after retirement might have had lower levels of health and well-being, and a consequent lack of energy that led them to believe that continued work activity would only have reduced their levels of life satisfaction.

My results concerning how the interaction between having returned to work after retirement and current age is associated with the likelihood of being in a good state of general health are of significance in understanding how activity and disengagement operate with advancing age. The typical individual aged 50 to 59 years could be expected to desire an active lifestyle because at this age, most individuals are in a physical and mental state characterized by energy levels that encourage activity. To be disengaged from paid work at this age could be indicative of a health problem that makes paid work either unfeasible or undesirable.

An interesting outcome obtained in addressing the relationship between bridge employment and health/well-being is that life satisfaction among those who retired after turning 65 years of age is slightly lower for those who have returned to paid work. This can be explained through a consideration of the declines that inevitably occur as individuals grow older. The finding that work after retirement is generally associated with better health and higher well-being serves to support the fundamental tenet of the activity theory of aging that continued activity and maintenance of important social roles in the later years serve to uphold a positive image of self and to maintain high levels of health and happiness. The finding that life satisfaction is not higher among work returnees who have first retired after turning 65 years of age supports the disengagement theory of aging in its claim that because of physical and mental declines with advancing age in the later years, it is beneficial for older individuals to gradually withdraw from active involvement in the community.

This outcome perhaps also can be explained by Longino and Kart (1982) who provide reasons why formal activities could be associated with reduced levels of well-being among older individuals. They include among these reasons the claim that formal activities involve hierarchical social systems marked by less intimate secondary relationships that allow for negative comparisons to be made that place those with functional limitations in low degrading positions. As those returning to work beyond the age of 65 years are quite likely to have some functional limitations, this provides a second reason why this group of older individuals might not benefit in life satisfaction by returning to work. In fact, those of high levels of education and of high levels of income

might be willing to return to work roles after retirement in their later years because they are aware that their abilities and past status will not lead them to be degraded within workplace hierarchies.

Since happiness in old age is likely to be achieved when one has freely chosen a set of activities that one believes correspond well with one's character and abilities, and that will therefore lead to higher levels of well-being, the goal to be strived for is a setup that will make work an attractive option for people even until quite late in life. The following section delves into these policy considerations.

### **5.6. Implications for Policy**

My results highlight issues of gender inequality that should be acted upon. The societal structure should be adjusted so that women are able to accumulate the savings and pension benefits throughout their working lives that will place them in situations of financial safety in their later years regardless of whether they are able to rely upon the finances of their husbands. The present thesis suggests the need for more support for affordable daycare that will allow many women to experience more stable working lives. It also suggests the need for more equitable workplace practices that do not disadvantage women in hiring and promotion and that do not place women taking leave from work for childcare in a disadvantaged situation. It is likely that if homecare and childcare were to be more evenly divided between husbands and wives, fewer women would find themselves in troubled financial circumstances in their later years.

McMullin and Cooke (2004) identify some policy options that can help alleviate the economic consequences of an aging population. Among these policy options are the development of flexible workplace practices that grant older individuals choice in the work they perform and in its scheduling (McMullin and Cooke 2004). They also promote the encouragement of learning across the entire life course and activity in the later years, as well as the active recruitment of older individuals by employers. Much in tandem with the suggestions of McMullin and Cooke (2004), the remainder of the policy recommendations made in this thesis pertain to the education and training of older

individuals and to the use of flexible workplace practices that allow paid work to be accommodated to the needs and preferences of older persons. These recommendations are based on the finding in this study of a steep increase in the rate of involvement in bridge employment with higher levels of education as well as on my outcomes in answering the question of how post-retirement work is associated with health/well-being that suggest the need to develop workplace conditions that allow even older individuals to experience a happy working life.

Scholars have emphasized that older individuals with lower levels of education are less likely to be involved in bridge employment largely because of difficulties they face in finding paid employment (Griffin and Hesketh 2008; McNamara and Williamson 2004). Education builds job-finding skills and provides contacts that facilitate the finding of paid work (Griffin and Hesketh 2008). Furthermore, there are more employment opportunities for individuals of higher levels of skill (Griffin and Hesketh 2008; McNamara and Williamson 2004; Price 2005). Because difficulty finding paid work is one reason many older individuals do not return to work after retirement, scholars have argued for the importance of policies and programs that will make paid work more accessible to older individuals. Some have promoted programs that will aid with job search (McNamara and Williamson 2004) and that will allow for the training of older individuals so that appropriate paid work can more easily be found in later life (McMullin and Cooke 2004; McNamara and Williamson 2004).

A view of the labour force as a whole reveals that not all occupations are likely to meet with labour force shortages as a consequence of the impending mass retirement of members of the baby boom generation. The occupations at risk of labour force shortages are those of relatively old age structure, those of relatively young age at retirement, and those that are in a process of expansion (McMullin and Cooke 2004). Occupations within education and health care, for example, tend to have relatively old age structures and relatively low median ages at retirement (MacKenzie and Dryburgh 2003). Because managerial positions across many sectors of the economy require many years of experience and skill development, and tend to be occupied by older individuals, the planning for the replacement of retiring managers will be a challenge in the near future

(MacKenzie and Dryburgh 2003). McMullin and Cooke (2004) include occupations in transportation, technical services, professional services, and natural resources among those that will soon be facing potential skill shortages because of mass retirements in the near future.

Thus, a policy recommendation of the present study is that training programs should be developed to provide older workers with the skills that will allow them to return to the workforce as members of those professions that are at risk of skill shortages. If the outcomes concerning levels of education and post-retirement work obtained in the present study are partly due to the fact that inadequately trained older individuals have difficulty finding suitable work after retirement, then training programs that will qualify older individuals for various types of work should afford them greater opportunity to return to the labour force. If these training programs are geared towards occupations that will likely be facing skill shortages in the near future, then they could also serve to alleviate some of the economic consequences of the mass retirement in the near future of members of the baby boom generation.

The next policy recommendation concerns the outcomes in addressing the question of how bridge employment is associated with levels of health and well-being. My study shows that having returned to work after retirement is not associated with higher levels of life satisfaction among those who retired at the age of 65 years and older. Statistics Canada (2011) claims that since 2004, the average age at retirement has remained at about 62 years. Thus, according to the results of the present study, most older individuals first retire at an age at which subsequent return to paid employment is associated with higher levels of life satisfaction. Concerning the fact that I have found that bridge employment after a first retirement after having turned 65 years of age is not associated with higher levels of life satisfaction, I wonder if return to work even quite late in life would be associated with higher levels of life satisfaction if workplaces were set up to better accommodate the needs and preferences of older workers. Statistics Canada's *A Portrait of Seniors in Canada* (2006) cites the 2002 *General Social Survey* that presents numerous factors that older individuals claim would have increased the likelihood that they would have continued working instead of retiring. Among them are



the option to reduce either the weekly number of days worked or the length of the working day, the provision of more time for vacation, the option of working part-time, and the provision of a higher salary. If adjustments such as these could keep older individuals in the workforce, it is conceivable that they could also contribute to the likelihood that work even quite late in life is associated with higher levels of life satisfaction. Numerous scholars have promoted the idea that older workers should be allowed flexible schedules that grant them the option of working shorter days and of working fewer days per week (McMullin and Cooke 2004; McNamara and Williamson 2004). Older workers with a certain extent of disability could be assigned helpers or could be provided with special services and equipment for transportation and rehabilitation (McNamara and Williamson 2004). Flexible work schedules and disability provisions such as these could allow older individuals to profit both financially and socially from maintained involvement in the workplace while having the free time to engage in other pursuits. While older workers will thereby be given more control over their retirement, employers will profit from their skills and accumulated experience. Funds will thereby be made available for the recruitment and training of new workers (McMullin and Cooke 2004).

As we consider the topic of work activity in the later years within a population that is rapidly growing older, perhaps the goal should be to set up places of work and to structure the larger society in a way that will make paid work an attractive possibility for many older persons for those who would like to or need to continue working for pay. In accordance with Statistics Canada's *A Portrait of Seniors in Canada* (2006) and with the 2008 *Expert Panel on Older Workers* (Denton and Spencer 2009), I suggest that older individuals should have a high amount of freedom to shape their own work schedules and to decide the structure and pace of their work. This will allow older individuals the freedom to design their work involvement in a manner that will be congruent with their preferences. We can also hope that if health care and healthy living improve, and if society continues to become more educated, higher numbers of older people will by volition choose to perform paid work. The results of Lemon and his colleagues (1972) and Longino and Kart (1982) suggest that workplaces that provide many social opportunities and organize many social events will allow their older workers to achieve

high levels of life satisfaction because these social experiences will facilitate the development of more intimate personal relationships among co-workers that will provide the role supports that lead to the development of a positive self-concept. It must be understood that the most that can be done is to allow every person to remain healthy for and willing to engage in activity for as long as is possible, with the understanding that it is inevitable that at a certain point in time, a process of disengagement will need to begin.

### **5.7. Limitations**

The limitations of this study are based on some of the limitations of the dataset employed. The GSS-21 is a cross-sectional dataset. A longitudinal dataset would allow for a more effective examination of how factors in one's past are associated with one's retirement decisions. Furthermore, the dataset employed lacks retrospective information concerning respondents' past health, income, and careers. Variables such as these would have added much to this study's examination of correlates of choices in retirement.

The cross-sectional nature of the dataset implies that some of my interpretations assume an ordering of events across the life course that might not be an accurate reflection of the lives of all individuals composing the final analytical sample. For example, my claim that widowhood could lead to a lower likelihood of post-retirement work because of the emotional consequences of widowhood assumes that widowhood occurred at a point in time not too far before one might consider a return to work after one's retirement. The issue of widowhood is irrelevant to bridge employment among those who retired, returned to work, and then experienced widowhood at a later point in time. Thus, my results must be understood as generalizations across a large aggregate sample, and there is all the more need for a study such as this to be repeated with longitudinal data.

Moreover, this study has examined only post-retirement paid work and has included all categories of paid work within this unitary designation. Outcomes could differ depending on whether one is examining part-time versus full-time work, or self-

employed work versus work as a salaried employee. Results could also differ based on whether one is examining volunteer work versus paid work after a first retirement.

Chapter 3 included a caveat concerning the fact that the present study made use of the GSS-21 unweighted microdata file. Therefore, adjustments have not been made for the biases caused by the sampling strategy employed and by the fact that the GSS-21 had a non-response rate of 42 percent. This places limitations on the extent to which the present study's results are representative of the entire target population of the GSS-21.

### **5.8. Recommendations for Future Research**

Understanding of the topic of bridge employment can be significantly furthered through longitudinal research that establishes the time-order of all life course events included in the analysis. A longitudinal study of this topic could effectively examine how occupation, health, and socioeconomic status earlier in life help determine one's retirement decisions and behaviours. Such longitudinal research could also help identify how spousal characteristics, marital circumstances, and family circumstances more broadly influence important decisions that are made in later life.

Future research on the topic of work in the later years should also subdivide the general concept of work into numerous subcategories, including part-time work and full-time work, self-employed work and work as a salaried employee, as well as paid work and volunteer work. Research concerning work after retirement should consider whether a respondent's retirement was voluntary or involuntary. This could impact whether a respondent seeks out post-retirement work, the type of post-retirement work in which a respondent becomes involved, as well as his or her levels of health and well-being in retirement. Future research should also examine a more extensive set of interactions between variables that are likely to be associated with retirement decisions as well as with levels of health and well-being in retirement.

## **5.9. Conclusion**

As the baby boom generation reaches retirement, and as the near future will be characterized by many people leaving the workforce, policies and programs must be put forward that will maintain the health of the economy. Many have suggested that policies and programs that will prolong the typical working life can alleviate many of the negative effects of an aging population. Such policies and programs must be based on knowledge of current retirement trends and of how demographic characteristics are associated with the decisions individuals make concerning their own retirement. The present study has uncovered knowledge of this sort that can provide aid as adjustments are made in order to accommodate to a quickly aging population.

However, it would be socially unjust for older workers to be encouraged to remain in the workforce for the sake of the larger society if this continued work were to detract from their quality of life. Thus, knowledge must be obtained concerning how work in the later years is associated with levels of health and happiness. The results of the present study give reason for optimism as I have found that continued work after retirement is generally associated with higher levels of health and happiness. The near future will be a very interesting time in Canada as researchers seek to understand and policymakers seek to best manage a rapidly aging population and all its ramifications for the Canadian economy and for Canadian society as a whole.

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## Appendices

- Reference categories in the logistic regression analyses are bolded.

### Appendix A: Questions from the GSS-21

#### P. 3: AGEGR5

Age group of the respondent (8 categories)

- 45 to 49
- 50 to 54
- 55 to 59
- 60 to 64
- 65 to 69
- 70 to 74
- 75 to 79
- 80 years and over

#### P. 4: SEX

Sex of respondent

- **Male**
- Female

#### P. 4: MARSTAT

Marital status of the respondent

- Married
- Living common-law
- Widowed
- Separated
- Divorced
- Single (Never married)
- Not stated (Missing)
- Don't know (Missing)

## P. 19: SRH\_Q110

## General state of health

- Excellent
- Very good
- Good
- Fair
- Poor
- Not stated (Missing)
- Don't know (Missing)

## P. 20: SRH\_Q115

## General state of mental health

- Excellent
- Very good
- Good
- Fair
- Poor
- Not stated (Missing)
- Don't know (Missing)

## P. 20: SRH\_Q120

## Satisfaction with quality of life as a whole

- Very dissatisfied
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...
- Very satisfied
- No opinion (Missing)
- Not stated (Missing)
- Don't know (Missing)

## P. 88: EVRRETIR (EVERRETIRED)

Respondent ever retired

- Yes
- No
- Don't know (Missing)
- Not stated (Missing)

## P. 89: AGERETI1 (AGE\_FIRST\_RETIRED\_C)

Age of respondent when FIRST retired (7 categories)

- Less than 45 years
- 45 to 49 years
- 50 to 54 years
- 55 to 59 years
- 60 to 64 years
- 65 to 69 years
- 70 years and more
- Never retired (Missing)
- Not stated (Missing)
- Don't know (Missing)

## P. 210: RTW\_Q300

Did any paid work at any time at a job or business after retirement

- Yes
- **No**
- Not asked (Missing)
- Not stated (Missing)
- Don't know (Missing)



## P. 457: EDU10

Highest level of education obtained by the respondent (10 groups)

- Doctorate/masters/some graduate
- Bachelor's degree
- Diploma/certificate from community college
- Diploma/certificate from trade/technical
- Some university
- Some community college/CEGEP/nursing
- Some trade/technical
- High school diploma
- Some secondary/high school
- Elementary school/no schooling
- Not stated (Missing)
- Don't know (Missing)

## P. 569: INCM

Annual personal income of the respondent

- No income
- Less than \$5,000
- \$5,000 to \$9,999
- \$10,000 to \$14,999
- \$15,000 to \$19,999
- \$20,000 to \$29,999
- \$30,000 to \$39,999
- \$40,000 to \$49,999
- \$50,000 to \$59,999
- \$60,000 to \$79,999
- \$80,000 to \$99,999
- \$100,000 and more
- Not stated (Missing)
- Don't know (Missing)

**Appendix B: Variables Recoded**

Current age, derived from AGEGR5:

- 50 to 59 years
- 60 to 69 years
- **70 years and older**

Marital status, derived from MARSTAT

- **Married or living common-law**
- Widowed
- Separated or divorced
- Single (never married)

General state of health, derived from SRH\_Q110

- Excellent/very good/good
- **Fair/poor**

General state of mental health, derived from SRH\_Q115

- Excellent/very good/good
- **Fair/poor**

Life satisfaction, derived from SRH\_Q120

- **The first 5 categories, beginning with very dissatisfied**
- The last 5 categories, ending with very satisfied

Age at retirement, derived from AGERETII

- **54 years and younger**
- 55 to 64 years
- 65 years and older

Highest level of education, derived from EDU10

- Doctorate/masters/some graduate/bachelor's degree
- Diploma/certificate from community college
- Diploma/certificate from trade/technical
- Some university
- Some community college/CEGEP/nursing
- Some trade/technical
- High school diploma
- **Some secondary/high school**
- **Elementary school/no schooling**

Annual personal income, derived from INCM

- **\$0 to \$29,999**
- \$30,000 to \$49,999
- \$50,000 to \$79,999
- \$80,000+

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