

RETIREMENT, CONTROL, AND THE CHALLENGES OF AGING

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The value of exploring the potential risks of retirement to individual well-being via a longitudinal analysis framed by theory is demonstrated in this study in a variety of ways. The measures for well-being are a sense of personal control and the experience of depression, and the sample used is of 260 individuals who were either working in 1995 (T1) and 1998 (T2), retired at both times, or who moved from work to retirement between T1 and T2. The analysis used was a mixed model repeated-measures ANOVA, and the theory which helped frame and interpret the analysis was social learning theory. Well-being, itself, is defined as the capacity to live life to its fullest - often characterized as self-actualization - which in all likelihood will be increasingly important to many of the exploding number of individuals who find that much of their life may actually follow retirement, which, in fact, is a relatively recent social institution. Among findings in this study which may be worth pursuing in the future via both qualitative and quantitative research are that 1) individuals working at both T1 and T2

demonstrated a significantly greater sense of personal control than those retired at both time periods; 2) that individuals who moved from work to retirement between T1 and T2 actually showed a modest increase in their sense of personal control, as opposed to the other work status groups; and 3) that individuals who moved from work to retirement actually showed a significant decrease in the experience of depression, again as opposed to the other two work status groups. Some objectives of future research suggested by these findings might be to 1) design studies focused on well-being which begin tracking individuals prior to retirement, with pre-retirement preparation programs offered by many private and public institutions, and continue to study those individuals for at least ten years, or even longer, as with the Harvard Study of Adult Development; 2) develop domain specific scales for a sense of personal control for both the work and retirement environments; and 3) focus attention on, and stimulate policy debate around, the costs and benefits to society of a relatively new social institution: retirement.

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PREFACE

Few today would doubt that "aging" stands as a central and growing challenge to our society, or that at present there exist more questions than answers in how best to meet this challenge. And few would also doubt, it seems, that one of the most fundamental questions in meeting this challenge relates to "retirement," especially in that retirement emerged as an institution in our society only within the past century.

David Walker (2007), Comptroller General of the United States, for example, said recently about the challenges of aging that "The first baby boomer will reach 62 and be eligible for early retirement of Social Security January 1, 2008. They'll be eligible for Medicare just three years later. And when those boomers start retiring in mass, then that will be a tsunami of spending that could swamp our ship of state if we don't get serious." Ben Bernanke (2006), Chairman of the Federal Reserve, adds detail in his own recent speech, along with an interesting nuance, when he suggests most generally that "In coming decades,

many forces will shape our economy and our society, but in all likelihood no single factor will have as pervasive an effect as the aging of our population," and then specifically suggests that 1) to not act may mean, based on a Federal Reserves model, that "per capita consumption of future generations would be about 14 percent less;" 2) that a "greater sacrifice by the current generations," in the context of what he conceptualizes as a type of intergenerational justice, may reduce the drop in future consumption to only 4%; and 3) that one solution is "higher rates of labor force participation, particularly by those who would otherwise be in retirement." Bernanke (2007) then further suggests in testimony to The House Budget Committee that "Although the retirement of baby boomers will be an important milestone in the demographic transition . . . the change in the demographic structure is not just a temporary phenomenon related to the relative size of the baby-boom generation" and that we thus "should explore ways to make the labor market as accommodating as possible to older people who wish to continue working, as many will as longevity increases and health improves." And in a more general forum *USA Today* (2006) in a lead editorial suggests that gradually raising the "full retirement age," first to 67, and then to 70 would go a long way toward resolving funding shortfalls in Social Security.

One additional voice, however, is that of a woman who admits only to being around for "more than three quarters of a century," and who when given her "Turn" to be heard in *Newsweek* (2006) forcefully declared that while in a "cavernous do-it-yourself home-improvement store" she took great exception to what she felt to be a "condescending remark" when "a thirtysomething clerk looked at me and then made an announcement over the loudspeaker, 'Will someone from plumbing please escort this young lady to aisle 14.'" She then not only admits that up until that moment she "had been feeling well," but in having her sense of self challenged, came away feeling somehow diminished.

And that is where this paper seeks to promote a better understanding of just one dimension of this challenge: that of the well-being - as measured primarily by a sense of personal control, and secondarily by depression - of those who find themselves, as Freedman (1999) suggests, in a literal new stage to life, and in a role which has only recently been conceptualized: retirement.

1.0 INTRODUCTION

Dychwald (2005) suggests that today's concept of "retirement" is relatively recent, and only emerged in Germany in the 1880's when Bismarck implemented a state pension entitlement. The age for such retirement was 65, and life expectancy 45. The United States followed in 1935 with Social Security legislation, and again marked the "official" onset of old age as 65. However, if Bismarck's formula were applied today, the "official" onset of old age would shift dramatically - to age 97. These shifting realities, then, point to a key challenge for our society, which is to better understand this fundamental marker of aging - retirement - and its potential impact on the well-being of individuals who find themselves in what Freedman (1999) characterizes as nothing less than a new stage of life.

At the same time, many scholars maintain that our response to the challenge of aging thus far has been less than stellar. A key dimension of this failing, some suggest, is to not frame research with theory, but instead to respond primarily in a problem-driven way (Bengtson et al, 1999; Marshall, 1995; Myers,

1995). Others suggest, however, that a main failing is harmful discrimination against the aged, with retirement, itself, most representative of this perceived injustice (Estes et al, 2001 & 2003; Green, 1993; Hazan, 1994; Noonan, 2005).

The central purpose of this study, then, is to help promote understanding in this vital area by testing the premise that retirement does, indeed, represent a risk to individuals as they age - as measured primarily by a sense of personal control - and to do so within the context of one over-arching analytic frame: social learning theory, as defined by both Rotter (1954) and Bandura (1976). In further seeking to explore the potential disempowering risks of retirement, this paper will also examine the link between retirement and depression. In each case, the key concern is the risk of diminished well-being to individuals as they age and retire, with a sense of personal control, according to Lent (2004), especially relevant to well-being as defined in an "Aristotelian" sense by the ability to "actualize human potential."

Among the benefits of using social learning theory to frame this analysis is that: 1) it accounts for the external/macro challenges of a changing social environment; while 2) also stressing individual/micro exchanges with that environment, and the learned attitudes that stem from that exchange. Also of note is the convergence of what Rotter (1982) has termed the

"meaningful psychological environment" with the milestone changes in that environment represented by the dramatic role transition of retirement. Marshall (1995), too, makes an important point in urging the linkage of micro and macro perspectives, and suggests that "the most exciting theoretical challenges" in aging research today are "attempts to link the micro-and macro-levels of analysis."

At the same time - in using a sense of personal control as a primary measure of well-being - it is important to note, as Pearlin and Pioli (2003) suggest, that there are a number of ways to conceptualize personal control, with two of the most studied concepts - locus of control and self-efficacy - central to this analysis. And beyond that, the importance of the general concept of personal control is given even more credence by the widely recognized insights of White (1959), who suggests that even at a young age, and in the context of "Freudian" ego development, individuals struggle to and are motivated by the need to master their environment. It is also important to note, as Schaie (2003) points out, that evidence for the "beneficial effect" of a "sense of personal control" is both extensive and overwhelming.

Data for this analysis, then, will come from a study funded by the National Institute on Aging as part of its effort to promote secondary research - *Aging, Status, and Sense of Control*

(ASOC) - in which researchers interviewed more than 2,593 individuals in 1995, and 1,378 of those same individuals in 1998, with an oversampling of those over 60.

It is also important to note, that research to date does point to a lessened sense of control for those retired versus those still working, with Drentia and Ross (1998) drawing from the above noted ASOC data to establish that relationship. Even so, the studies thus far have been cross sectional, with this paper's intent to more fully explore longitudinal insights, and to do so, as noted, within the analytic frame of theory.

1.1 STATEMENT OF THE PROBLEM

In providing context for both the general challenge of retirement to our society, and the more focused topic of this paper, it is important to understand that the number of individuals moving toward retirement is immense - with approximately 78 million of them "baby boomers" born between 1946 and 1964 - and the challenges to our society equally immense. One key challenge is economic, while another, as already noted, relates to individual well-being.

In turning first, then, to the more general economic challenge, classical economists offer a useful analytic frame

(Heilbroner, 1999; Hunt and Sherman, 1986). All markets, classical economists maintain - including the market for labor - should work freely, with impediments to that freedom producing inefficiencies in the economy, and thus less than optimal outcomes for society. Clearly, retirement, by arbitrarily removing workers from the labor force, stands as an impediment to a freely functioning market for labor, and as such can be expected to impose real economic costs on society. One dimension of that cost is lost productivity, while another is the need for others to then support non-productive individuals. Even so, in looking more closely at the relatively short evolution of retirement, it seems that the marketplace is, indeed, as economists might predict, struggling toward an ultimate equilibrium, in which, according to Graebner (1980, p. 16) "the needs of capital" will eventually gain the "acquiescence of most Americans" in pushing toward what Graebner anticipates to ultimately be the "disappearance" of retirement.

Most broadly, then - since Bismarck's age for retirement was set at 65 when life expectancy was 45 - retirement could be characterized as a concept which began primarily as an illusion, but which grew dramatically in response to the relatively short-term market and profit-driven incentives of modern capitalism, and which now has come full circle in that economic incentives

today seemingly point towards at least a possible re-conceptualization.

The first economic incentive, many argue, for modern capitalists to encourage older workers to retire resulted directly from gains by workers - often with the help of unions - in securing shorter working-hours. Efficiency, then, in the wake of this change, became increasingly important to the business sector, with older workers viewed as less efficient than their younger counterparts. Pensions were rare at first, however, with "discrimination" against older workers the primary mechanism for moving individuals into retirement (Costa, 1998; Graebner, 1980).

A second incentive for retirement came more broadly from the Federal Government, which faced an unprecedented economic crisis during the Great Depression. A first step here came in the guise of the Wagner-Hatfield Railroad Retirement Act, which was passed in 1934 in response to the loss of almost 300,000 jobs in an industry of key national importance, and which was struck down by the Supreme Court for its discriminatory thrust. In summing up a central rationale behind this act, the Railroad Labor Executives Association noted that "Almost every business has a problem of disposal of waste of some kind. . . The old age retirement problem arises from the embarrassment the management encounters in removing from the payroll those who are no longer

efficient, on account of old age. The removal of human waste is more costly than the removal of material waste, because it must be done humanely" (Graebner, 1980, p. 179). The Supreme Court, however, found this reasoning inconsistent with the general welfare clause of the constitution.

The Federal Government followed in 1935 with Social Security legislation, and again marked both retirement and the "official" onset of old age as 65. And with the concept already tested before the Supreme Court just a year earlier, the Committee for Economic Recovery cited the welfare of those retiring as the central reason for the legislation, although debates within the committee, itself, again indicated that the more fundamental reason for retirement pensions was to provide jobs for younger workers in response to overwhelming Great Depression unemployment (Costa, 1998; Graebner, 1980).

Retirement, then, having been rationalized as a way to promote well-being, was marketed as such as the 20th century progressed, and ultimately became an accepted and anticipated entitlement. However, if Bismarck's formula were applied today, the "official" onset of old age would shift, as noted, in such a way as to help explain the economic crisis now anticipated by many as economic realities shift - along with the numbers of those expected to retire (Dychtwalk, 2005). And not least among these new economic realities is the emergence of a highly

competitive and integrated world economy - along with the type of production-function innovations anticipated by Schumpeter (1939) as capitalism evolved - resulting not only in a greater emphasis on services in the United States at the expense of manufacturing, which has often moved abroad, but also in the lessened influence of unions.

The issue of individual well-being, however, as already evident - has followed an almost opposite track from that of economic well-being. For much of its relatively short existence, as already noted, "retirement" was simply rationalized by policy-makers - both public and private - as promoting such well-being. But now, however, in a truly ironic way, it may serve both individual and economic purposes to at least explore the possibility that retirement does, indeed, not promote individual well-being after all - at least for significant numbers of people. And, in fact, it may have just the opposite effect, and for reasons perhaps most potently stated by Lent (2004), when he suggests that individual well-being - at least in the Aristotelian sense of a capacity to lead life to its fullest - may have very little to do with the "hedonistic" feel-good retirement message of 20th century marketeers.

This, then, shifts the focus to costs which free markets cannot capture - social costs. The central factor here, instead,

becomes social justice. One such social cost - and the focus in this paper - is diminished individual well-being, which in this paper will be measured primarily by an individual's sense of personal agency/control, and secondarily by depression.

1.2 SIGNIFICANCE OF THE PROBLEM

This problem is significant because 1) the risks to our society, and to individuals in this new stage of life - as defined by Freedman (1999) - may very well be real, and 2) the numbers of those at risk are substantial, with those over 65 projected, as already noted, to be somewhere near 80 million individuals by 2030 (Dychtwald, 2005). Clearly, then, the potential social cost of an unjustly served population of this magnitude is immense.

And if, indeed, these potential costs are both real and substantial, it is important for social workers to be sensitized to that, and to respond with both intensified research and intervention strategies. It also becomes increasingly important for social workers to help build awareness of this risk, and to possibly advocate for policy change, especially relative to the incentives in our society for individuals to "retire" from work.

Also adding to the significance of this problem are issues of timing, with debates on how to "rescue" Social Security and

Medicare increasingly central to the policy agenda. It is vitally important, then, that the very idea of retirement be part of this debate, and that its potential social cost be fully understood.

1.3 PURPOSE OF THE STUDY

The purpose of this study, then, is to test the premise that retirement does, indeed, pose social welfare risks to those so engaged. Clearly, the numbers of those in what Freedman (1999) calls this "revolutionary" new stage to life - which now typically follows retirement - are large, and growing ever larger, with diminished individual well-being resulting from both a lessened sense of personal control and depression a potentially ever growing risk, and independent of simple aging, itself. If, then, a significant relationship is established between work status/retirement and these disempowering outcomes - especially as reflected in this longitudinal analysis - such understanding allows both anticipation of such an occurrence and the development and execution of a compensatory response.

1.4 RESEARCH QUESTIONS

The specific research questions, then, are:

1. What is the nature of relationship patterns between Time One (1995) and Time Two (1998) work status - defined as working full-time at both times, retired at both times, or moving from work to retirement during this period - and an individual's sense of empowerment at these two times, as measured by 1) a sense of personal control, and 2) depression?
2. Is there any indication - consistent with the longitudinal dimension of this study - that potentially harmful trends emerge between Time One and Time Two, and specifically that those who move from work to retirement exhibit the most significant loss in a sense of personal control, along with the most significant increase in depression?

1.5 HYPOTHESIS

The central hypothesis of this study is that there will be a significant relationship over time between work status, as

defined above, and an individual's sense of personal control - and specifically that 1) those working at both times periods will have a significantly greater sense of personal control than either those retired at both times or those moving from work to retirement, and 2) that those moving from work to retirement will exhibit the most significant loss in a sense of personal control - and that the same kind of disempowering relationship will be found between work status and depression, with those moving from work to retirement again exhibiting the most significant increase in depression.

1.6 DESIGN OF STUDY

In seeking to answer the questions and test the hypothesis as noted above, this study will include the following key elements:

1.6.1 The Sample

The sample used in this analysis comes from The Aging, Status, and Sense of Control (ASOC) study conducted in two waves in 1995 and 1998, and which draw from the universe of English-speaking

adults aged 18 or older in the United States. It is a probability sample with an oversampling of persons aged 60 and older. The N for 1995 was 2,593, and for 1998 was 1,378. The same questions were asked in both waves, with questionnaire details in Appendix A. In further focusing the sample for this study, however - given its emphasis on aging and retirement - the primary sample of interest will be of individuals between the ages of 56 and 71 who responded to interviews at both Time One (T1) in 1995 and Time Two (T2) in 1998, and who fall into one of the three key work status categories at the heart of this analysis. Four hundred and twenty four individuals, then, between the ages of 56 and 71 responded to the survey in both 1995 and 1998, with 260 of those individuals in one of the three work status categories of interest.

1.6.2 Independent Variable

The primary independent variable in this analysis will be work status, as reflected in three longitudinally generated measures: 1) retired at both Time One (T1) and Time Two (T2); 2) working at both T1 and T2; and 3) moving from work to retirement during the three years between T1 and T2. No individuals in this sample, however, moved from retirement to work between T1 and T2.

1.6.3 Dependent Variables

The key dependent variables, which are intended to reflect well-being as defined in the "Aristotelian" (Lent, 2004) sense of a capacity to most fully realize human potential, will be: 1) a sense of personal control, as measured by an 8-item personal control scale; and 2) depression, as measured by a 7-item scale.

1.6.4 Control Variables

Among variables used to reduce random error by controlling for various factors which might also influence the dependent variables - primarily within the context of Social Learning Theory and its focus on individual exchanges within the meaningful psychological environment - will be variables related to person-intrinsic traits, such as age, gender, and race, along with other variables which may affect an individual's sense of empowerment in this meaningful environment, such as health, social support, and economic hardship, among others.

1.6.5 Analysis

The key relationships hypothesized in this study will be tested via a mixed-model repeated measures analysis of variance, with various control variables, as appropriate, entered as potential covariates.

1.7 IMPORTANCE OF THE STUDY

Among the benefits of raising awareness of the potential risks of retirement to diminished well-being - as measured by a sense of personal control and depression - is both the value of anticipating a problem of possibly great magnitude, along with the opportunity such anticipation allows to design and implement interventions to avoid - or at least mitigate - at least some of those negative effects. Secondly, where appropriate, social workers would be better able to direct attention to this challenge and to advocate for changes in policy. And the most fundamental benefit, perhaps, as already noted, may simply be the recognition by social workers that a problem/ challenge does exist, especially given the widely documented link of a sense of personal control to life outcomes in a number of key domains.

In a more specific sense, establishing the relationship between retirement and a sense of personal control may lead to programs which either promote a greater sense of control, or which provide support to those with a more external orientation. There is, in particular, extensive research on how to promote a sense of control via guided mastery and modeling (Caplan, et al., 1989; Eden & Aviram, 1993; Lent, et al., 1994). There is also evidence that an increase in coping abilities and beliefs will promote internality (Smith, 1989), which then becomes circular, in a sense, as internality further promotes an ability to cope with the challenges of aging. Direct experience, however, as indicated by social learning theory, is still the most powerful factor in promoting a sense of control, and could probably be most effectively delivered by giving these individuals real work to do, either paid or unpaid.

Depression, even more so than a diminished sense of control, offers widely recognized opportunities for a compensatory response, once social workers and others are sensitized to the increased risk as a consequence of retirement.

A final potential benefit, of course, may flow from more fundamental changes in the "macro" social environment, along with at least modest shifts in policy, which, in turn, would not only benefit the individuals at risk, but lessen the economic pressures of an ever increasing non-productive population.

Ultimately, though, this study may be most important simply because it draws attention to the possibility of a problem/challenge, and seeks in doing so to promote social justice for a rapidly expanding universe of potentially vulnerable individuals.

2.0 REVIEW OF LITERATURE

A number of areas in the literature will contribute to this analysis, and will help establish: 1) that there, indeed, is a need to better understand the evolution of retirement, and its potential risks to the well-being of individuals, and to society generally; 2) that individuals clearly face significant challenges in retirement; 3) that there is, indeed, merit in using social learning theory as an analytical frame in trying to more fully understand the risks and challenges of retirement; 4) that the concept of personal control is both a credible and enlightened way to measure individual well-being, as is depression, in that both impact the capacity of individuals to most fully realize their potential in the added years of life which now typically follow retirement; and 5) that there is reason to believe, based on previous research, that there may be a risk of diminished control and of depression as individuals age and retire.

The first area for review, then, relates to the potential risks of retirement. How, indeed, has the concept of retirement evolved, and what has it come to mean today? And what, then, are the potential costs to society, and the likelihood that this population is at risk of a lessened sense of personal control - and thus disempowerment - resulting in large measure from the bias and discrimination inherent in this relatively recent concept/social institution of retirement? These questions, then, are the focus of a section on "The Institution of Retirement."

A second area of review, which is the focus of a section on the "Challenges of Retirement to the Individual," relates to the fundamental challenge of role and identity shift inherent in retirement, along with the two other pervasive challenges related to health and finances. What, indeed, are the dynamics and potential impacts of role shift? And what are the probabilities of the need to cope with both health and financial challenges in retirement?

A third area of review is on "Social Learning Theory" - the theoretical frame for this study - and relates to the benefits of using social learning theory to better understand the social and psychological dynamics of retirement.

A fourth key focus, then, relates to "Measures of Well-Being" - and especially to the concept of personal control,

which clearly lies at the heart of this study. One reason to focus on the impact of retirement on control, as broadly defined - given the various dimensions/definitions of control that have contributed to a better understanding of the concept over time, as noted by Pearlin and Pioli (2003) - is that the concept of personal control has an extensively documented link to outcomes in areas as diverse as health, education, athletic performance, counseling, addictive behavior, work, and career development; with domains such as the capacity to pursue health promoting behaviors, and even the capacity to continue to both work and to actually "build" careers (Freedman, 2007) of particular interest for the population under study in this analysis. The section on well-being, then, expands on the many reasons for making the concept of control a central measure for the potential social cost of retirement, and on the likelihood that this population, in particular, is at risk for the variety of poor life outcomes which evidence indicates may result from a lessened sense of personal control.

A final section, then, on "Aging and a Sense of Control" reviews previous studies which have examined the issue of aging and/or retirement as they relate specifically to the central outcome measure in this study, which is a sense of personal control.

2.1 THE INSTITUTION OF RETIREMENT

2.1.1 Evolution

The formalization of retirement in our society is probably a good place to start in looking at the evolution of this concept. A key first step took place when policy-makers first seriously looked at retirement as a way to help resolve serious unemployment problems with the onset of the Great Depression - initially with one major "interstate commerce" industry, the railroad industry, and then more generally via Social Security - with more purely social welfare concerns probably of secondary importance. Until that time, however, the gradual evolution of retirement had primarily taken place in the private sector, and in the context of the industrial revolution (Costa, 1998; Graebner, 1980). But as Dychtwalk (2005) notes, until the rise of modern capitalism, when most individuals worked in their homes or on farms, a fundamental premise was that people worked until they died. But once individuals moved in large numbers from home to factory in the latter part of the 19th century, labor became primarily a commodity to be factored into profitability formulas of the modern corporation, with one element in that formula being the moving of less efficient older workers into retirement - especially as the hours of work per

week dropped (Costa, 1998; Graebner, 1980). And it is also important to understand that the overall costs of the new Federal pension were projected as being modest, with workers expected to live only a few years past the retirement age of 65 (Axinn & Levin, 1992).

The ultimate evolution of retirement, however, has been very different from anything imagined by most policy-makers in the midst of the Great Depression, as both costs and their impact on the United States in a new global competitive environment have only grown with the demographic shifts and the generosity of retirement benefits, including Medicare. And evolving expectations by individuals as they are conditioned to their "right" to anticipate a "golden age" of retirement only compound the challenge (Costa, 1998; Dychtwald, 1999, 2005; Graebner, 1980)

Perhaps the most recent phase in this evolution is that retirement is taking place earlier, while the economic burden, mainly for structural reasons, continues to increase (Dychtwald, 1999). And again, this in large measure results from the very effective marketing of retirement as a well-earned "golden age," which individuals, as they age, somehow are entitled too, and which in large measure is the product of modern marketing (Dychtwald, 2005).

2.1.2 Bias and Discrimination

In looking at this very important "macro" dimension in the "debate" regarding the institution of retirement - especially given the centrality of an individual's "meaningful environment" to social learning theory - and to this study - a good place to start may be with a very stark quote from Graebner (1980, p. 18). He writes:

Age Discrimination, of which retirement is a particular variant, dates from the last quarter of the eighteenth century. Not until a century later, however, did either the larger phenomenon of age discrimination or the specific mechanism of retirement come to affect large numbers of persons. In the two decades before 1880, age discrimination grew virulently, as the owners and managers who made personnel decisions for American corporations redefined the work force to achieve increased efficiency. . . Economists and physicians constructed an ideology that reinforced and rationalized discrimination; scientific management carried it out in shop, factory, and office.

Graebner (1980) then goes on in a very factual way to delineate the various expressions of this discrimination, including forced retirement at a time when private pensions were rare, a failure to hire older workers, and ultimately

retirement's official recognition in Federal laws, such as Social Security, aimed not, as the debates in the Committee on Economic Security would indicate, mainly at promoting the well-being of retired workers, but primarily at the employment of younger workers.

Costa (1998), too, adds details to support Graebner's broad conceptualization, including 1) that in 1880, 96 percent of all 65 year olds and 81 percent of all 70 year olds were working, while in 1990 those figures had dropped to 39 percent and 22 percent respectively; and 2) that the Committee on Economic Security in 1935 found that older workers found "great difficulty" in finding new employment once dismissed from a job, with that finding reinforced with data from 1996 and 1993.

In adding to these facts, Palmore (1999) notes that 1) there is no sudden loss in ability at any particular age, including 65, and that retirement, therefore, is a "major" example of discrimination; 2) that two Harris surveys found that eight of ten Americans believe that age discrimination is real, as do six out of ten employers, with these perceptions reflected in 17,500 age discrimination lawsuits filed in 1993, alone, before the Equal Employment Opportunities Commission. And in a less concrete way, Palmore also cites countless examples of cultural bias, including characterizations in the media, and even in the language used to characterize older individuals. And

when it comes to language, perhaps no one had more impact than William Osler, a widely known doctor, who in an extensively reported address at John Hopkins, suggested that men over 40 years of age were relatively useless, and after 60 years of age absolutely useless (Costa, 1998; Graebner, 1980).

And finally, to put the nature of this problem in more personal terms, Noonan (2005) found - via ethnographic research - that the bias against individuals as they age in our society is both pervasive and destructive. Perhaps two of her respondents put it most powerfully - one a 61 year old white male who worked as a corporate manager, and the other a 60 year old African- American woman who had worked as a clinical social work supervisor. The man put it this way:

Where I am today, I got all these fantastic skills, and I'm . . . frustrated, because I'm being discriminated against . . . Now that I am . . . 61, and everyone that I know . . . is telling me, 'Forget about it, nobody is going to hire you, you might as well just retire.' I say, 'How the hell can I retire? I've got more energy than 35-year old guys.'

(p. 217)

The following woman speaks with equal power:

And I'm interviewing where people . . . because I'm a senior clinician, they [would] have a lot of trouble paying

me if they can get someone . . . three years out of school . . . So it's really crazy out there right now . . . and even though I tell them . . . I'm willing to take a cut, I'm not getting it. So I'm really, because of my age, I'm having a lot of trouble with this. I had expected to work later than 60 years old. (p. 18)

So bias and discrimination relative to retirement does, indeed, seem at least probable.

2.1.3 Potential Costs to Society

Perhaps, in looking at the more general potential costs to society, David Stockman, Director of the Budget for Ronald Reagan, provides insight: nobody really understands the numbers, he said, upon first stepping into his new job. That was in 1981, and it wasn't long before Stockman not only understood the numbers, but was warning of big threats ahead (Morris, 1999). In some sense, then, Bismarck's formula for retirement when applied to today's realities, as noted earlier, poses the same type of question. What, indeed, do these numbers mean?

Many economists, demographers, and the like starkly proclaim that the threat to our society is, indeed, substantial,

and sum up much of their concern in what is commonly known as a dependency ratio. In 1935, when Social Security became law, there were 40 workers for each retiree. Today that figure stands at slightly more than 3 workers for each retiree, and is projected to stand at only 2 workers for each retiree within about 10 years (Dychtwald, 2005). And even now the consequences of these "numbers" on both Social Security and Medicare are making headlines across the country, as Walker (2006), U.S. Comptroller General, calls with some urgency - in the face of what he also characterizes as a "crisis" - for overhauling both programs.

In looking just a bit more deeply, however, Freedman (1999), for example, notes that 1) a person born in 1900 could expect, on average, to live until about age 47, while today that figure stands in the upper 70's; 2) the number of those in the United States over age 65 has increased ten-fold since 1900 to almost 40 million individuals; and 3) we have yet to feel the impact of the "baby-boomers" born between 1946 and 1964. Dychtwald (2005) adds even more specifics to the challenge of the "baby boomers" in noting that those over age 65 will exceed more than 70 million individuals by 2030, severely taxing our society in a variety of ways, including, as noted above, overwhelming institutions such as social security.

And, of course, as already noted, to apply Bismarck's ratio today would shift retirement to age 97, with further intensification of the challenge flowing from the very obvious issue of timing: clearly the "problem" of "dependent retirees" is now not only on the policy agenda, but is increasingly central to debate. In any case, given the numbers cited by Freedman (1999), among many others, the potential magnitude of this problem for both individuals and our society is immense, even if only a fraction of the ever increasing numbers of those living far beyond age 65 suffer from either a diminished sense of control or depression, and thus are disempowered in efforts to live this relatively new stage of life to its fullest, which for many may, indeed, include work - even if that work represents as Friedman notes in his recently released book *Encore* (2007) a completely new and passion-driven career - and the rewards both they and our society would realize in that work.

2.1.4 Potential Risks to Individual Well-Being

One way to begin the exploration of the risk to individual well-being in the role transition from work to retirement is to look at a sense of personal control - defined in a multidimensional

way (as delineated later in this paper), as Pearlin and Pioli (2003) suggest - and at the extensive links of this concept to life outcomes in a wide variety of situations and domains. What indeed, is the probability, that these individuals may be disempowered via a lessened sense of personal control?

Lent, Brown, and Hackett(1994), in particular, highlight the potential impact on an individual's sense of personal control of a central element in social learning theory: the meaningful environment. This, in turn, relates to Bandura's (1997) concept of triadic reciprocity - in which he suggests a circular interplay between personal attributes (such as a sense of self-efficacy or control), actual behavior, and the environment. Limited opportunities, then - which is what Lent, Brown, and Hackett suggest is a key element in the social environment for those facing bias and discrimination - given this premise, clearly would tend to promote a type of self-sustaining diminished sense of control for any individual facing discrimination, with many scholars today suggesting that individuals today as they age and retire face just such bias and discrimination (Estes et al, 2001; Green, 1993; Hazan, 1994).

In exploring the likelihood, then, of disempowerment via bias and discrimination directed at individuals as they age and retire, a good place to start is with the landmark book by Solomon (1976), *Black Empowerment - Social Work in Oppressed*

Communities, which was sparked by her interest in another clearly discriminated against "group of individuals".

One of the most important things discovered by Solomon in her research was the critical influence of powerlessness for a number of problems faced by families, individuals, and groups in black communities. The theoretical framework that began to emerge from this discovery had at its core the impact of negative environmental valuations, with significant risk that such valuations lead to "extreme helplessness, feelings of unworthiness and apathy" (Solomon, 1976, 12). In one key observation, she reflects on Bertrand Russell's insight that power is as fundamental to the social sciences as energy is to physics (Solomon, 1976).

Many others, then, have expanded on Solomon's insights in ways which help promote an understanding of the centrality of a sense of personal control to the well-being of individuals as they age and retire. Rappaport (1987), for example, finds that empowerment is centered on a sense of control, and that environmental factors are important in promoting this sense of control. Rappaport (1981) further suggests that in addressing social problems, social as well as health experts should begin promoting just such a sense of control. Parsons (1989), then, suggests locus of control (LOC) - another dimension of the concept of control cited in this study - as a way to measure

empowerment, as does Zimmerman (2000), who noted that LOC was central to empowerment. And clearly the same kind of links can be drawn between the other dimensions of personal control, as presented below, and both empowerment and outcomes for individuals as they age and retire.

And in providing further insight, Bandura (1997) notes the deep roots of the struggle for control in that even "early man" turned to rituals and various other types of conduct to influence supernatural powers. Ultimately, people, for the most part, developed a different sense of cause and effect in their lives, and came to believe in their own influence on outcomes. Bandura further suggests that this "striving for control of life circumstance permeates almost everything people do throughout the life course" (Bandura, 1997, 2).

A second way, as noted earlier, to explore the risk of retirement to a diminished capacity for life satisfaction during the years following such retirement is via depression. And here, clearly, the evidence for a potential impact on life outcomes and on the capacity to seek various rewards and reinforcements during this revolutionary new stage to life is both obvious and overwhelming.

2.2 CHALLENGES OF RETIREMENT TO THE INDIVIDUAL

2.2.1 Role and Identity Shift

In looking at the challenges that individuals face in retirement, perhaps most fundamental is that of role shift. Davis (1996) provides a helpful perspective here in suggesting that what often has been called "role theory," serves just as well as an orientation in understanding the centrality of role in an individual's life course, and to its importance for both a sense of self and identity. It is especially fitting for the analytic frame provided by social learning theory, in that the role orientation focuses on the person-environment transaction, in much the same way that social learning theory makes such a transaction its central unit of analysis (Rotter, 1982). And of additional importance, "Role," as Marshall(1995, p. 17) notes, "is a basic concept in sociology and social psychology" with many definitions and connotations," which further argues, it seems, for its value in this study as an orientation for better understanding the challenges of retirement, and also for, as Noonan (2005, p. 212) notes, an individual's "attachment to the work role." In expanding, then, on what contributes to this

"attachment to the work role," Noonan, among other things, notes 1) identity and status, 2) meaningful activity, 3) structure, and 4) social interaction. Marshall (1996), too, stresses the importance of a sense of self and identity in role and role expectations, with the struggle to maintain continuity in identity a key challenge in the dramatic role shift represented by retirement.

In any case, key contributions of role to a sense of both place - in a more general structural-functionalist sense - and identity include its contribution to one's sense of: 1) social position and place; 2) social identity; 3) status; 4) behavioral expectations; 4) relationship expectations; and 5) general norms(Davis, 1996).

Perhaps most important, though - in the context of social learning theory - is that the individual's meaningful environment has clearly changed in a dramatic way as a result of this fundamental role shift, and that those experiencing this transition are challenged to make a major life adjustment. Phillips (1957), in fact, in seeking to gauge the impact of the role transitions of aging on adjustment, found that the role change associated with retirement was, indeed, "significantly related to maladjustment (p. 217).

2.2.2 Health Challenges

A good approach in better understanding this challenge to individuals as they age and retire is to begin, as Stockman did, by looking at the numbers, and here, it seems, the news is both good and bad. First, of course, are the overriding numbers as noted above which project that the population of those over age 65 will grow ever larger, from 40 million now to more than 70 million by 2030. And at the same time, research shows that health issues do, as expected, increase as people age, with 80% of those over 65 suffering from one chronic disease, 50% from two chronic diseases, and 24% from 3 chronic diseases (Dychtwald, 1999). But even so, it is important to note, as Costa (1998, p. 83) suggests - based on extensive studies, such as the National Health Interview Survey - that "An individual today looks forward to a long retirement, much of which is spent in good health.," with Palmore (1999, p. 23) adding in a discussion of the myths versus the reality of aging, that "most elders retain their normal mental abilities."

And as a final note, it is also important to note that a sense of personal control, as referenced below, is strongly linked to health promoting behaviors of various types, and therefore may be especially important in helping individuals

both promote health, and cope specifically with health challenges as they arise.

2.2.3 Financial Challenges

Clearly, in retirement, there is a risk of income loss, which individuals can anticipate and prepare for, primarily by accumulating capital, which for most people means saving and investment. In looking at present trends, however, especially as they relate to baby-boomers, savings rates have been historically low, with spending in a broad sense excessive, and to a large extent supported by debt (Dychtwald & Kadlec, 2005).

In coping with this challenge, then, for those who face severe financial challenges, work rather than retirement may be essential, with a sense of personal control, along with a positive - rather than depressed - mental outlook a key contributor in helping make this possible.

Even so, it is important to note, as Costa (1998) suggests, that many who are retired today face relatively minor economic challenges, which, in part, helps explain why so many retirees as they age today are able to not only support themselves, but to live independently. This, however, may clearly be impacted by the more general risks to our society as both Social Security

and Medicare ultimately confront both the demographic and competitive realities of a new century.

2.3 SOCIAL LEARNING THEORY

2.3.1 Rotter's Social Learning Theory

In seeking to most fully understand the usefulness of Rotter's social learning theory as an analytic frame for this study, it would perhaps be best to present the foundational elements of his theory in his own words:

Social learning theory is a molar theory of personality that attempts to integrate two diverse but significant trends in American psychology - the stimulus-response, or reinforcement, theories on the one hand and the cognitive, or field, theories on the other . . . There are four classes of variables in social learning theory: behaviors, expectancies, reinforcements, and psychological situations. In its most basic form, the general formula for behavior is that the potential for a behavior to occur in any specific

psychological situation is a function of the expectancy that the behavior will lead to a particular reinforcement in that situation and the value of that reinforcement (Rotter, 1982, p. 267).

Rotter (1982) also stresses that social learning theory "adopts an empirical law of effect . . . to explain motivation" (p.307), rather than drive-reduction, and that the key "unit of study is the interaction of the individual with the meaningful environment" (p. 57).

Regarding the dynamics of reinforcement in the above noted relationships, Rotter (1982) stresses the importance of direct experience, while recognizing that indirect, observed reinforcements can also influence behavioral potential. A further determinant of the reinforcement value of a particular experience, according to Rotter (1982), is individual need, which, for example, is often social acceptance, and which obviously may be central to the person in the environment exchanges of role transition in retirement.

Also of central importance is that Rotter (1982) does not view the locus of control/I-E concept, which developed out of social learning theory - and which many scholars view as fundamental to social learning theory - as central to the theory at all, but primarily as explanatory in helping better

understand reinforcement seeking behavior in various life domains.

2.3.2 Bandura's Social Learning Theory

Bandura (1976), more so than Rotter, stresses indirect learning in what he also called social learning theory in a 1976 book, and which he later termed social cognitive theory. In any case, in addition to direct experience, Bandura believes that individuals learn in the context of their environment in both indirect and direct ways, and specifically build a sense of what he terms self-efficacy via their perceptions of how others behave and achieve valued outcomes in various life domains.

Bandura (1976) further adds to Rotter's insights by stressing the reciprocal nature of the process. He specifically states that "psychological functioning is a continuous reciprocal interaction between personal, behavioral, and environmental determinants" (p.194).

2.3.3 Relevance to Study

Social learning theory, as defined primarily by Rotter (1954), with key insights from Bandura (1976) - provides an especially useful analytic frame for this analysis, in that it accounts for both the "macro" challenges of a changing "meaningful" environment, while also stressing "micro" individual exchanges with that environment. Especially relevant, is the emphasis on "learned" attitudes, such as a sense of personal control, that stem from that exchange.

Clearly, then, a central challenge of the macro environment examined in this study is the need to respond to and "cope" with the central role transition of retirement. In fact, as Abels (2003) suggests, ageism, itself, has much to do with the dynamics of role, especially as it relates to "social stratification systems" (p. 26).

But regardless of the challenge - which also can include for individuals as they age the loss of a spouse, declining health, economic crises, etc. - Schaie (2003) notes that a sense of personal control, which is a key "explanatory" factor in social learning theory, has been shown to promote a person's basic ability to take action and cope more effectively. Koeske & Kirk (1995), too, note the apparent influence internalization has on coping with and buffering stress, which clearly is a factor for

many as they encounter the challenges of aging, including retirement.

2.4 MEASURES OF WELL-BEING

2.4.1 Personal Control

As Pearlin and Pioli (2003) note, a sense of personal control can be regarded as a "generic concept," while at the same time being seen by many - who may be "speaking about the same thing though using different language" - as "distinguishable" concepts, such as those used to help define control in this study. Even so, there is universal recognition, as Schaie suggests (2003), of the links of control to life outcomes, with a greater sense of personal control promoting more positive outcomes. Among the constructs central to understanding a sense of personal control in this paper, then, are locus of control and self-efficacy, (Eizenman et al, 1997; Hall et al, 1998; Lent, 2004; Pearlin & Pioli, 2003; Pushkar, et al, 1997). And

also of note, as Abeles (2003) stresses, is that a sense of personal control is a subjective belief - mediated by the mind - rather than a reflection of objective reality.

2.4.1.1 Locus of Control/I-E

Locus of Control is characterized as either internal or external (I-E), and is based on an individual's learned beliefs about whether outcomes result from one's own behavior (internal), or whether, instead, they result more from chance, luck, powerful others, or simply fate (external) (Rotter, 1966). And soon after the publication of Rotter's I-E scale in 1966 to measure this attribute, as Pearlin and Pioli (2003) note, there was an "outpouring" of research on this particular measure for control, which they attribute to the availability of Rotter's scale, itself.

In any case, much of the research which followed publication of the I-E measure, did, indeed support the link of a greater sense of personal control to positive outcomes in a variety of areas. Koeske & Kirk (1995), for example, note an "almost exclusively favorable" link between internality in LOC and outcomes in a variety of areas, including general levels of achievement, physical and emotional health, seeking helpful or

beneficial information, and in the workplace. Strickland (1988), too, finds a link between internality and positive outcomes where, for example, those who are sick demonstrate a greater ability to manage and maintain health with higher internality. And extensive empirical evidence on the link between internality and positive outcomes is presented by Lefcourt (1981), in a series of publications summarizing research on this construct.

It is also important to note that some research has failed to establish the link between LOC and self-efficacy and outcomes. Bandura (1997), for example, cites several studies where self-efficacy has been predictive, but LOC has not. Among the areas addressed by those studies were tolerating pain, academic performance, control of diabetes, the experience of anxiety, preventive dental practices, efforts to stop smoking, and political participation. Haynes and Page (1979) also report on the dropout behavior of African-American high school students, where LOC failed to show the expected relationship.

2.4.1.2 Self-Efficacy

In introducing the contribution of self-efficacy to the conceptualization of control, Pearlin and Pioli (2003) once again provide a good overview in noting that an individual's

sense of control rests primarily on the expectancy that the desired outcome can be achieved, and that the individual is capable of actually doing the behavior - which is a key focus for Bandura - to achieve that desired outcome.

In turning, then, to the link between self-efficacy and outcomes, Bandura (1997) highlights areas such education, work, health, and athletics. And in specifically noting the link between efficacy and health promoting behaviors - which have particular value for individuals as they age - Bandura lists domains such as weight control, preventive dentistry, control of diabetes, and smoking cessation.

There also, however, are examples of a failure of self-efficacy to predict outcomes. In one such study, which sought to predict both a coping and a performance response under controlled laboratory conditions, self-efficacy was found to predict a lessening of anxiety, but not the ultimate outcome of solving a puzzle (Endler, et al., 2001). Even so, the evidence for a link between these constructs - locus of control and self-efficacy - and outcomes so far exceeds negative findings that it seems likely that methodological shortcomings may, at least in some way, be contributing factors.

2.4.1.3 Supplemental Insights of Competence

The concept of competence also helps supplement the primary - and much more widely researched - insights of locus of control and self-efficacy, which clearly are central to the measure used in this paper. Perhaps of most importance is its fundamental focus on an "organism's . . . intrinsic need to deal with the environment" (White, 1959, p. 297, 318). This insight, then, focuses on the developmental struggle of individuals to ultimately be autonomous in managing the person-in-the-environment exchange. Any type of dependency, then, clearly would undermine an individual's sense of autonomy, and according to competence insights trigger a motivational response to re-establish self confidence (Hall, et al, 1998). Arbitrary and conflicting incentives to act otherwise, such as those found with retirement, would seem, then, to highlight risks inherent in the challenge of the "meaningful environment" facing many today as they age.

White (1959) also adds three other key insights to the concept of control in that he 1) focuses on very early childhood efforts - even in the cradle - to exert control vis-à-vis the meaningful environment; 2) ties his insights to a non drive-reduction aspect of "ego/identity" development; and 3) stresses the importance of novelty and challenge in the environment. In fact, he even uses the example of individuals who "retire" from

what they perceive to be a stressful situation, only to find themselves soon bored and seeking new "mastery" challenges. Most basically, White suggests that individuals have an "intrinsic need to deal with the environment."

2.4.2 Depression

Depression, clearly, has been a concern in research on both aging and retirement, with De Beurs, et al (2001), among many others, suggesting that life events involving loss, such as retirement, often are seen as a threat for depression, with other life events involving threat promoting anxiety. In looking merely at numbers, Rahman (2005) suggests that 15% of the world's population 60 years of age and over is depressed, with others, Catanzaro et al (1995, p. 259) finding too that "Older individuals report higher levels of depressive symptoms," with retirement often listed as a possible contributing cause. And in reporting on suicide rates Lazarus and Lauer (1985) note that white males 70 and over have the highest rate of suicide. Even so, there have been relatively few studies done specifically on work status and depression, with some studies finding that retirees are more depressed, and others that they are less depressed (Drentea, 2002).

In any case, depression will be a key outcome measure in this study, and will be operationalized via a 7-item scale developed by Mirowsky and Ross (1984), and which represents a modification of the more extensive CES-D scale.

2.5 AGING, RETIREMENT, AND A SENSE OF PERSONAL CONTROL

A number of key studies help create a foundation for this research, with Ross & Drentea (1998), however, noting that relatively little research has been done on psychological well-being and retirement, and "even less has compared employed persons to retired persons on the sense of personal control" (p. 320). Mirowsky (1995), for example, notes "inconsistent and contradictory results (p. 33) in studies that look at age and control. Even so, in using the 1990 Survey of Work, Family, and Well-Being, Mirowsky does find via a cross-sectional analysis that a sense of control in this sample does diminish with age, but that "most of the association between age and the sense of control remains unexplained (p.41)." In looking, for example, at individuals grouped in 10-year age segments, Mirowsky finds, based on "crude means" that control remains relatively stable for the 10-year groups up until age 50 at a level just above .07

- on a scale of -2 to +2, with 2 representing the greatest sense of control - but that it declines for each 10-year segment after, with respondents over 80 having dropped to a crude mean of below .04, and with that drop in a one-way analysis of variance significant at a $p < .001$ level.

Ross and Drentea (1998), then, in using data from the 1995 wave of the Aging, Status, and Sense of Control (ASOC) survey - and also via a cross-sectional analysis - find retirees to have "significantly lower" levels of personal control than full-time employees, and that this relationship, in following-up on Mirowsky's findings above, "remains after adjustment for age." And perhaps of most importance - in their attempt to fundamentally test the two competing hypotheses of whether retirement on the one hand may be "liberating" versus whether on the other hand it may be "alienating" - they conclude that "We find little support for the view that retirement is liberating overall, compared to employment. Retiree's perceptions of personal control are significantly lower" (p. 330).

And finally, Ross and Mirowsky (2002) - again using the ASOC data, but in at least a partially longitudinal way, find that women as they age show a more diminished sense of control than men. Here again, as in Mirowsky's study above of age and control, Ross and Mirowsky use a scale for control which ranges from -2 to +2, and find that women over 55 have a mean sense of

control of .47 versus .65 for men, and that the difference is significant. For women under 55, however, the mean sense of control is similar to that of men, with women at .73 and men at .75. In then adjusting for a change over time, they enter Time 1 as a control variable, and find the results to be similar to those of the cross-sectional analysis. Even so, they conclude that "much is left to be explained" (p. 141)

These studies, then, create a foundation for exploring the key question at the heart of this study, which relates specifically to the relationship of work status to control, and does so in both a longitudinal way, and in the context of social learning theory and its focus on a wide variety of individual "micro" transactions within a more "macro" and often changing meaningful environment.

2.6 SUMMARY AND ASSESSMENT OF THE LITERATURE REVIEW

The key challenge at this stage of the analysis - with findings from the Literature Review presented above - is to answer two central questions: 1) is there a problem worthy of study; and 2) does the conceptual response, as outlined in this paper, find

credence in the literature? It seems that the answer to both questions is "yes," and for a number of reasons.

As to evidence for the potential risk of retirement to individuals as they age, perhaps most important is the challenge of role shift in an individual's meaningful environment, and to a concomitant sense of self or identity. And, clearly, social learning theory - as defined by Rotter and Bandura - gives a good sense of how increasingly less rewarding interactions with that environment - linked specifically to a major shift in role, and to ways in which bias and discrimination may be associated with that - might lead to a lessened sense of personal control, and even to depression. It is also important to note, as the literature reveals, that there is a strong likelihood that this particular population is, indeed, disempowered via such bias and discrimination, just as has been documented for other such "marginalized" populations.

And regarding specific domains where the link between a more significant sense of personal control and better life outcomes has been demonstrated, perhaps most important for this analysis are health promoting behaviors, and the ability to cope with challenges, such as those flowing from losses in both the personal domain, such as diminishing health or the loss of a spouse, or more externally in the loss of valued roles or of economic independence. On the one hand, of course, there is good

news in that health for those as they age is relatively good, but clearly such health can be better maintained and enhanced through health-promoting behaviors, with a second positive area relating to financial stability which clearly may be promoted through continuing capacity to both work and build careers. But based on general challenges to our society, as documented above - primarily as the result of an interplay between demographics, global economic competition, and internal economic challenges, specifically as those challenges are distilled in concepts such as "dependency ratios" - it will be increasingly important to have an empowered "aging" population, especially if retirement, for the mutual benefit of both the society and its citizens, moves into a new stage in its evolution.

It is also important to note that the extensively documented link between a sense of personal control and life outcomes - especially for self-efficacy and locus of control, where much of the empirical research has focused - supports the potential benefits of this study, which is that there will be the same general link between a sense of personal control and outcomes in a wide variety of life domains for individuals as they age and retire.

One key insight contributing to study conceptualization and design is the value of using theory to frame the analysis, and specifically in this case the appropriateness of social learning

theory for that frame. Another important contribution of theory as an analytic frame is the way in which it helps create a foundation for future research, especially in that it helps promote understanding and helps identify future avenues of inquiry via focusing on theory-based explanations for empirical findings (Bengtson, et. al, (1999); Marshall, 1995). And in a very specific way, social learning theory - with its focus on a reciprocal exchange between the individual and his or her meaningful environment as the central unit of study - seems most appropriate for understanding both the process and consequences of retirement, especially given the dramatic changes in the meaningful environment which result from a fundamental transition in role, and in how individuals, given significant internal and external change, relate to the meaningful environment as they both age and retire (Rotter, 1982). And beyond that - given the many "extra" years of life individuals can expect beyond retirement - the key outcome variable of a sense of personal control seems especially meaningful, in that control "generalizes" to empower individuals to seek rewards/reinforcement in many other life-domains (Rotter, 1982). Depression, too, as a secondary measure, is appropriate for the same reason, in that it, too, may diminish the capacity of individuals to seek rewards/reinforcement as they age and retire.

And finally, the analysis proposed here would seem to build on insights already established by the few studies which have already used this specific data in an attempt to better understand the relationship of aging and retirement to a sense of personal control, and to do so - as they for the most part have not - within the analytic frame of theory. A further key benefit of this study - and one which ultimately yields the potentially most important finding of the study - is that it, unlike the other studies, applies a longitudinal analysis to the relationship of retirement/ work status to both a sense of personal control and to depression.

2.7 HYPOTHESIS

The hypothesis at the heart of this study, then, as noted in Chapter I, flows from three key findings in the literature: 1) from the fundamental premise of social learning theory that attitudes/personality constructs - such as an individual's sense of personal control, which has so often been cited in the literature as a product of social learning theory - are learned as a result of the ongoing "micro" exchanges of individuals with

their more "macro" meaningful environment as they seek rewards/reinforcement which they value in that environment, with the mind clearly functioning as a mediator in this process; 2) that a discriminatory "meaningful environment" encountered by individuals as they age in our society - with the fundamental role transition of retirement considered by many as perhaps most representative of that discrimination - will in a wide variety of ways provide negative reinforcement and promote the kind of self-sustaining dynamic represented by Bandura's concept of triadic reciprocity, in which personal attitudes/expectations, behavior, and the meaningful environment all interact and influence each other; and 3) that this ongoing negative reinforcement creates a risk for diminished expectations for reward fulfillment, and thus for a diminished sense of personal control, and ultimately well-being, for individuals as they age and retire, as it has for other groups cited in the studies above, such as African-Americans. And although depression clearly has medical dimensions, the mind still functions as a mediator in the process, and is expected to be related to work status/retirement in the same way as personal control.

And finally, in testing the central hypothesis of this study - that, as noted in Chapter 1, there will be a significant relationship over time between work status and an individual's

sense of personal control - and specifically that 1) those working at both Time One and Time Two will have a significantly greater sense of personal control than either those retired at both times or those moving from work to retirement, and 2) that those moving from work to retirement will exhibit the most significant loss in a sense of personal control - and that the same kind of disempowering relationship will be found between work status and depression, with those moving from work to retirement again exhibiting the most significant increase in depression - a number of variables suggested by the literature review above will be entered as covariates for control purposes.

Among "person-intrinsic" factors, for example, related to the various discussions of how bias and discrimination clearly can influence the "micro" exchanges of an individual with his or her meaningful psychological environment are age, gender, and race, which clearly should be controlled for in this analysis. Health, too, may influence an individual's experiences and expectations in seeking rewards/reinforcement in the meaningful environment, as does the ability to be physically active. And in seeking to control for an individual's "sense of self" - which is not only cited in the literature on role transition, but also by Rotter when he suggests that social acceptance is a key human need for many individuals seeking reinforcement in their meaningful environment - variables will also be included for

marital status, social support, occupational prestige,
education, and economic hardship.

3.0 RESEARCH METHODOLOGY

3.1 SAMPLE

Data for this analysis comes from the 1995 and 1998 waves of the *Aging, Status, and Sense of Control* (ASOC) study, in which researchers interviewed more than 2,593 individuals at Time One (T1) in 1995, and 1,378 of those same individuals at Time Two (T2) in 1998. In producing this sample - which given the focus of this study - reflects an oversampling of those over 60, the researchers did two sets of telephone interviews in which they called potential participants back at least 10 times to set up the interview, and then at least 10 more times to complete the process. In the more general sample, using random digit dialing - while screening for small businesses, etc - they called households nationally and talked to an individual 18 or over in the household with the most recent birthday. In the oversample portion of the study, researchers limited interviews to households with at least one individual 60 or over, and interviewed the 60 or over individual with the most recent birthday.

Ages in the 1995 sample ranged from 18 to 95, with fifty-eight percent (1,496) of those individuals under age 60, and forty-two percent (1,097) age 60 or older. For this study, however - given its emphasis on aging and work status - the sample of interest will be of the 260 individuals between the ages of 56 and 71 at Time One (T1) who responded also to interviews at Time Two (T2) in 1998, and who listed their work status as either 1) working at both T1 and T2 (55); 2) retired at both times (175); or who 3) moved from work to retirement during the three years between T1 and T2 (30), with these 260 individuals reflecting at least 99% of the full ASOC sample who listed their work status as "retired" at T1, along with at least 99% of those aged 56 or over who were working full time at T1.

Also of note is that funding for the *Aging, Status, and Sense of Control* (ASOC) study came from the National Institute on Aging as part of its effort to promote secondary research, and that the primary researchers were Mirowsky and Ross (2006).

3.2 DEPENDENT VARIABLES

The two dependent variables in this study are 1) a sense of personal control, and 2) depression. In operationalizing a

sense of control, the ASOC study uses an 8-item measure designed by Mirowsky and Ross (1991) - the lead researches in the ASOC study - to eliminate both defense and agreement bias; while depression is operationalized via a 7-item scale distilled again by Mirowsky and Ross (1984) from the more expansive Epidemiological Studies' Depression Scale (CES-D).

In seeking to eliminate both defense and agreement bias in their control measure, Mirowsky and Ross (1991) use a design in which 1) two statements claim control over good outcomes; 2) two statements claim control over bad outcomes; 3) two statements deny control over good outcomes; and 4) two statements deny control over bad outcomes. In doing this, as Mirowsky and Ross suggest, defensiveness is cancelled by a matched number of questions about good and bad outcomes, while agreement bias is cancelled by the same kind of match with what they term "instrumental" versus "fatalistic" statements.

In discussing the content validity of their personal control scale, Mirowsky and Ross suggest that it well represents its "domain of content," especially in its focus on an individual sense of control over "ones life." In then

Turning to criterion validity, Mirowsky & Ross use Rotter's 1966 I-E index as a "universal" standard for measuring a sense of personal control, and note an especially high correlation with the locus of control dimension in that scale. And regarding

construct validity, they note an expected positive correlation with variables such as income and education. They also report an alpha reliability for their scale of .68 for the 1995 wave, with that number slightly above .70 in 1998.

Among the items in the personal control scale, then, are 1) "I am responsible for my own successes;" 2) "I can do just about anything I set my mind to;" 3) "My misfortunes are the results of mistakes I have made;" 4) "I am responsible for my failures;" 5) "The really good things that happen to me are mostly luck;" 6) "There's no sense planning a lot - if something good is going to happen it will;" 7) "Most of my problems are due to bad breaks;" and 8) "I have little control over the bad things that happen to me."

Also of note is a relatively normal distribution for the 260 person sample at both Time One (T1) and Time Two (T2), as reflected both graphically and in a skewness measure for the personal control scale of .3 at T1 and .5 at T2, and a mean of 2.93 (SD of .33) at T1 and 2.90 (SD of .33) at T2, with 1 representing the lowest sense of personal control, and 4 the highest, and with everyone answering all 8 items used to produce the control scale at both time periods.

And also of note here, in regarding the assumption of normality in conducting an ANOVA analysis, is that Stevens (1996, p.242) suggests that "skewness has only a slight effect

(generally only a few hundredths) on level of significance or power. The effects of kurtosis on level of significance, although greater, also tend to be slight." He does admit that this finding may at first seem puzzling, but cites the Central Limit Theorem as providing a rationale.

In turning, then, to the 7-item scale for depression, the roots of its development go back to the development of the Center for Epidemiologic Studies' Depression Scale (CES-D) in 1977, which is a 20 item scale used to measure the symptoms of depression, and which, according to Mirowsky and Ross (1984, p. 997), is a "valid, reliable, and useful measure of depressive symptoms," and which 1) has "high internal consistency and test-retest correlation;" 2) "discriminates well between psychiatric inpatients and the general population and between people who say they need help for an emotional problem and those who say they do not;" 3) "correlates highly with other depression scales;" and 4) has alpha reliabilities of .83 for men, and .85 for women.

Mirowsky and Ross (1984, 1990) then modified this scale to the 7-items used in the Aging, Status, and Sense of Control (ASOC) study in an effort to better promote consistency between the key sub-groups of men and women, especially since married women report higher rates of depression than married men in responding to the more comprehensive 20-item CES-D scale. But in

doing a factor analysis to identify the fundamental psychometric properties of the larger scale, Mirowsky and Ross found 4 fundamental dimensions, including 1) depressed affect; 2) enervation; 3) positive affect; and 4) interpersonal problems. In then generating the more focused 7-item scale for "depressed affect" that better balanced the findings for men and women they did a phone survey in 1978 of a national probability sample of 1,360 married men and women, which they report as having a .92 correlation with the full CED-D measure, and an alpha reliability of .76. Respondents were specifically asked: "On how many days in the past week you" 1) "had trouble getting to sleep or staying asleep;" 2) "felt you just couldn't get going;" 3) "had trouble keeping your mind on what you were doing;" 4) "felt that everything was an effort;" 5) "felt sad;" 6) "felt lonely;" and 7) "felt you couldn't shake the blues."

3.3 INDEPENDENT VARIABLE

The independent variable in this study is work status, which, given the longitudinal nature of the analysis, is defined as 1) working full-time in both 1995 (Time One) and 1998 (Time 2); 2) being retired in both 1995 and 1998; and 3) moving from work to

retirement between 1995 and 1998. One important factor relative to this variable is that for those aged 56 to 71 at the first interview - the focal age range of this sample, as already noted - 175 individuals identified their work status in both 1995 and 1998 as retired, 55 reported working in both 1995 and 1998, while 30 moved from work to retirement during these 3 years, with men and women making up approximately 50% of the numbers in each category, and with this sample representing at least 99% of the full ASOC sample who listed their work status as "retired" at Time One, and at least 99% of those aged 56 or over who were working full time at Time Two.

3.4 CONTROL VARIABLES

Within the context of social learning theory, then, a number of control variables potentially relevant to an individual's exchanges with the meaningful environment were applied in the various models as potential covariates, with, the dependent variable - in adding these covariates - adjusted for these potentially confounding factors prior to the main analysis. And given the focus of social learning theory on the dynamic exchange between the individual and the meaningful environment, these "control" variables - as delineated in section 2.7

above, HYPOTHESIS, will seek to reflect two fundamental dimensions of that exchange: 1) intrinsic personal attributes - which may, as a fundamental concern of this study - contribute to bias and discrimination - and 2) other attributes which in one way or another may affect an individual's sense of empowerment in this fundamental exchange with the environment.

Among intrinsic personal attributes applied in this analysis, then, are age, gender, and race, with other potentially "confounding" variables reflecting: 1) marital status; 2) social support, as measured by 4-items which include having someone to really talk to, someone to turn to for support when sick, someone to turn to when in need generally, or someone to turn to when requiring other kinds of help; 3) self-reported health, as reflected in the answer to a single question on whether respondents would rate their "general" health as "very good," "good," "satisfactory," "poor," or "very poor;" 4) a capacity to be physically active, as reflected in a 7-item measure which includes ratings of "no difficulty," some difficulty," or "a great deal of difficulty" for the activities of climbing stairs, kneeling or stooping, lifting or carrying, doing household work (such as preparing meals), shopping or getting around, seeing, and hearing; 5) a 3-item measure for economic hardship, which reflects any problems during the past 12 months in either paying for general household expenses, paying for medical expenses, or more generally simply paying for bills; 6) an occupational prestige rating of the

last job held by each individual; and 7) highest level of education completed.

All variables, too, were measured at both Time One and Time Two, although the Time Two measures were used only in a supplementary fourth model which relaxes the two key assumptions/guidelines regarding covariates. Of importance, then, in integrating potential covariates into the various - and in a sense progressive - analytic models is the extent to which they 1) conform to the need for the covariates to have homogeneity of regression slopes; and 2) minimize the effect of time, itself - which fundamentally is the "experimental effect" in this analysis - on the covariates.

Another key issue, also addressed in a comprehensive way by Stevens (1996), is a guideline for the number of covariates which may reasonably be included in any one model, and which he presents as a formula: $C + (J-1)/N < .10$. C in this formula, then, represents the number of covariates, J the number of groups used for analysis, and N the size of the sample. When possible, Stevens suggests trying to include at least 2 or 3 covariates, in that it helps, to "reduce the error variance," which for many studies helps compensate for complexity in the interpretation of power analysis (Stevens, 1996, p. 321).

Many of these control variables clearly, then, are self-explanatory, but it may be helpful to look more closely at just a few

of them, beginning with one of particular interest for this study's focus on work (although it does violate the homogeneity of regression slopes assumption, and thus is included in only the third, and also supplementary model) - occupational prestige - which was developed by the National Opinion Research Center, and which is included in the General Social Survey. Perhaps of key importance is that the National Opinion Research Center (NORC) in updating their 740 occupational title measure via a national sample of 1537 individuals in 1998, suggest that there exist "high correlations between all prestige and SEI indicators. In fact, a principal components analysis of our six sets of prestige scores and three related sets of SEI scores underscores the importance of a hierarchical dimension of social standing. If all sets of scores measure the same hierarchical concept, we would expect them to have substantial shared variance and to yield a very high first eigenvalue in the principal components analysis. This is, indeed, the case. The first principal component accounts for fully 92 percent of the variance" (Nakao and Treas, 1993, p. 32). One result of these insights, then, is that education is used in the primary models to represent socioeconomic status (with income having extremely high missing values), and in so doing would seem to be reflective of both income and occupational prestige. Occupational prestige was, however, entered as a potential covariate in the supplementary third model, which relaxed the homogeneity of regression slopes assumption, because it does give some recognition,

even in a partially flawed analysis, to an individual's relationship to the role of work, itself.

In looking at other measures, too, Ross and Mirowsky (2002), in using the same general sample, find an alpha reliability of .82 for the 3-item economic hardship measure; and an alpha reliability for the physical functioning scale of .84. They also note that the self-reported measure for general health has been found to be both valid and reliable in measuring general physical well being.

Income however, was - as already noted - a problematic socio-economic measure, in that the missing values were very high, with a large number of individuals refusing to answer or reporting that they simply did not know what their income was, although if it were included, it would most likely simply compete for explanatory value with either education or occupational prestige.

3.5 DATA ANALYSIS

The key questions in this study, then, along with the relationships also hypothesized, will be tested via a mixed-model repeated measures analysis of variance, with potential control variables entered as covariates. A fundamental requirement, however, is that the covariates not interact with work status - in that all means for the dependent variables are adjusted by an equal amount - making it essential that each covariate be tested for a homogeneity of regression slopes. And also there will be an effort to minimize highly correlated potential covariates, as well as to use Time Two measures in only one "all-inclusive" model so as to minimize the various effects of time - which is central to this repeated measures analysis - on the control variables, themselves (Pallant, 2005).

And it should also be emphasized here that this analysis differs from previous studies noted in the literature review in that it is longitudinal and framed by theory, with the longitudinal design ultimately yielding some of the most surprising and noteworthy findings.

4.0 RESULTS

Reported below are 1) descriptive data for variables central to answering questions at the heart of this study; 2) results from a mixed-model repeated-measures analysis of variance to test the relationship between work status and a sense of personal control; and 3) results from a mixed-model repeated-measures analysis of variance to test the relationship between work status and depression.

4.1 VARIABLE DESCRIPTIONS

4.1.1 Independent/Grouping Variable

Work status: Most fundamental here is that 1) 55 individuals were working at both Time One (T1) and Time (T2); 2) 175 were retired at both time periods; and 3) 30 people moved during these three years from work to retirement. Also of note,

however, is 1) that for those working at both time periods, ages ranged from 56 to 71, with the distribution relatively normal, in both a graphic sense (as applied to all three groups), and with a skew of .81; 2) that for those retired at both time periods ages again ranged from 56 to 71, with the distribution again also relatively normal, with a skew of -.49; and 3) that for those moving from work to retirement during these three years, ages ranged from 57 to 71, with the distribution again relatively normal, with a skew of .30.

4.1.2 Dependent Variables

Personal Control: The mean value for this primary dependent variable was 2.93 (SD of .33) at Time (T1), and 2.90 (SD of .33) at Time Two (T2), with a range of 2, and with 1 representing the lowest sense of personal control, and 4 the highest. There was also a relatively normal distribution, in both a graphic sense, and with a skewness measure of .3 at T1 and .5 at T2, and with all respondents answering all 8 items in the scale at both time periods.

Depression: The mean for this second key dependent variable was .62 (SD of 1.18) at Time One (T1), and .64 (SD of 1.16) at Time (T2), with a range of 7, and with 0 representing the lowest

value/level of depression, and 7 the highest value. In looking at distribution, however, it is clear that both distributions are non-normal, in both a graphic sense, and as measured by skewness and kurtosis. The median, then, for T1 was .14 and for T2 was also .14. A log transformation, however, produced a modestly more normal distribution, and will be used for hypothesis testing.

4.1.3 Control Variables

Age: The mean age for Time One (T1), with a range of 56 to 71 - which, along with work status, clearly defines the sample analyzed in this study - was 64.6 (SD of 4), with a median of 64.5 and a relatively normal distribution, with a skew of -.22.

Gender: Approximately 51% (132) of the sample is female, and 49% (128) male.

Race: - 244 individuals, or 94 percent of the sample, identified themselves as "white," while 16 individuals, or 6 percent, identified themselves as other than white, with the relatively broad groupings of "white" and "non-white" used because of a relatively low N for the "non-white" portion of the sample.

Subjective Health: The mean here was 1.93 (SD of .93) for a subjective rating of health at Time One (T1), and 2.04 (SD of .95) at Time Two (T2), with a minimum value of 1 for "very good" and 5 for "very bad." The distribution is also relatively normal, with a skewness value of .87 at T1 and .75 at T2.

Physical Activity: The mean for this 7-item measure was 1.3 for both time periods (SD of .39 at Time One (T1) and .38 at Time Two (T2) - with a value of one representing no trouble doing an activity, two some difficulty, and three a great deal of difficulty - and with a mode of 1 reflective of a skew of more than 1.5 for both time periods, and with efforts at transformation ineffective. It should also be noted that this variable violates the homogeneity of regression slopes assumption.

Social support: The mean for this 4-item scale was 1.73 at Time One (T1) (SD of .47) and 1.78 at Time Two (T2) (SD of .45) - with one representing the greatest sense of social support and four the least - and with a relatively normal distribution, with a skewness of -.28 and -.34 respectively.

Marital Status: Approximately 74 percent (174) of the sample was married at Time One, and 63 percent (163) was married at Time Two.

Occupational Prestige: On a scale that ranged from a low of 17 to a high of 86 at Time One (T1), and 20 to 86 at Time Two (T2),

the mean was 47 (SD of 13.8) at T1, and 48 at T2 (SD of 12.9), and the distribution relatively normal for both time periods, with a skew of .34 both times. Also of note, is that this variable, just as physical activity, violates the homogeneity of regression slopes assumption.

Economic hardship: The mean for the economic hardship scale - defined as having trouble paying either for 1) household expenses, 2) medical expenses, or 3) bills during the past 12 months - was 3.84 (SD of .43) at Time One and 3.86 (SD of .40) at Time Two, with 4 representing no trouble paying for the items, as noted, and with a range of responses from one to four.

Education: The mean here was 13.72 (SD of 2.98) for a the highest level of school completed for Time One (T1), and 13.75 (SD of 2.97) at Time Two (T2), with a mode of 12 for both times periods. The distribution, however, too, is relatively normal, with a skewness value of -.09 at T1 and .19 at T2.

4.2 WORK STATUS AND A SENSE OF PERSONAL CONTROL

In doing a 2 (time 1 v. time 2) X 3 (work status) repeated measures analysis of variance to better understand the potential relationship over time between work status and a sense of

personal control, four models - as reflected in Table 1 - were employed, which: 1) simply tested the basic relationship between the main factor of work status and the repeated measures dependent variable for control at Time One (T1) and Time Two (T2); 2) added all previously noted control variables as potential covariates which met the two key assumptions of a homogeneity of regression slopes, and which minimized the effect of time, itself, on the controls; 3) added the two variables in the originally defined control set which violated the homogeneity of regression slopes assumption - physical activity and occupational prestige - to the control variables in Model 2 to simply test their impact on the analysis; and 4) an all-inclusive model which violates both the homogeneity of regression slopes assumption and guidelines for minimizing the effect of time, itself, and again is provided only in a supplementary sense.

The first analysis, then - as reflected in Table 1 - is of the relationship between work status as a factor, and the primary dependent variable of personal control at Time One and Time Two. The key finding here is that work status is, indeed, significant, with $F(2,257) = 4.73$, and $p = .010$. The estimated marginal mean sense of control across time for those working at Time One (T1) and Time Two (T2) was 3.02; for those retired at both T1 and T2 was 2.88; and for those moving from work to

retirement 2.90. And as Table 1 also notes - in looking at within subjects effects - neither the effect of Time (T), itself, on control, nor the interaction of time with work status (W x T) were significant.

Next, with the control variables for age, gender, race, health, marital status, social support, economic hardship, and education added as potential covariates which meet the assumption of homogeneity of regression slopes, and which minimize the effect of time, itself, on the controls, work status remained significant, with $F(2,240) = 3.20$, and $p = .043$. The estimated marginal means for control in this second model, then, were 3.00 for those working at both times, 2.90 for those retired at both times, and 2.88 for those who moved from work to retirement. And again, as in the first and most basic model, the within subjects effects were not significant.

And in moving next to the two models, which in one way or another, as already noted, violate the assumptions of the analysis, it is probably sufficient simply to note, as reflected in Table 1, that work status remained significant at a $p < .05$.

In finally seeking, then, to address the potential implications of not having an exact date for retirement for those who moved from work to retirement between Time One and Time Two (N=30) - especially since they showed a surprising increase in control over time - a more focused 2 x 2 analysis

was done excluding those who moved from work to retirement. And consistent with the expectation that retirement would be significantly related to a diminished sense of personal control, the main effect of those working at both T1 and T2 versus those retired at both times remained significant, both in the basic model without control variables, with $F(1,228) = 9.14$, $p = .0$, and in the second model which included all controls consistent with the assumptions of this analysis, with $F(1,213) = 4.34$, $p = .04$. The estimated marginal mean for the model with controls for those working at both times was 2.99, and for those retired at both times 2.89.

4.3 WORK STATUS AND DEPRESSION

In doing, as with personal control, a 2 (time 1 v. time 2) X 3 (work status) repeated measures ANOVA to better understand the potential relationship between work status and depression, it is first important to note that the distribution for depression was badly skewed, and that the analysis has been done by using a relatively non-successful log transformation. In any case, this analysis reflects the same models as for control, with the first analysis, again, the main relationship of work status to a

repeated measure for depression. The key finding here however - as reflected in Table 2 - is very different from that for control, in that work status is found to be not significant at all, with $F(2,257) = .903$, $p = .407$. The estimated marginal means for those working at both times was .37, for those retired at both times .45, and for those moving from work to retirement .36. It is also important to note, however, that the within subjects effects show an interaction of $W \times T$ with a p of .053.

The second model, too, with controls entered as covariates consistent with the assumptions of the analysis, fails to show a significant relationship of work status to depression over time, with $F(2,240) = .735$, $p = .48$. The estimated marginal means in this model for those working at both times was .38, for those retired at both times .46, and for those moving from work to retirement .41. But again it should be noted that the $W \times T$ interaction stands at .051.

And as with the analysis of control, rather than further examining the two models (with results reflected in Table 2) - which are not consistent with the assumptions of the analysis, but which reflect the same non-significant main effect - a separate analysis was done excluding those who moved from work to retirement, especially given the dramatic and surprising drop in depression highlighted graphically in Chart 2. In then doing this analysis without the work to retirement group, the effect

is still insignificant, with $F(1,228) = .992$, $p = .32$ in the basic model, and $F(1,214) = 1.47$, $p = .28$ in the model with controls. The estimated marginal means in the basic model for those working at both times were .39, and for those retired at both times .45, and in the model with controls for those working at both times .38, and for those retired at both times .47.

In that the analysis above results from a log transformed score of the depression scale with only partial success, additional non-parametric tests were performed in seeking to better understand the surprising results depicted best, perhaps, in Chart 2, especially in its reflection of the work to retirement results, where depression actually decreased, as opposed to the increase in the other two groups. The first test, then, was a 3 x 3 chi-square crosstabulation based on the three work status groups already well described, and a new three-level grouping of cases into those who stayed the same in depression ($n = 102$), those who became more depressed ($n = 85$), and those who became less depressed ($n = 73$). The Pearson chi-square was 8.34, the $df = 4$, and $p = .08$. In this analysis, 47% of the work-to-retired respondents became less depressed, compared to 26% and 25% for those stably retired and stably working, respectively. On the other hand, only 13% of the work-to-retired people showed an increase in depression, compared to at least one-third of those in the stable status subgroups. Although these analyses do

not take into consideration the control variables, they do reflect the same trend revealed in the primary analysis based on the depression scores, and further confirm that individuals moving from work to retirement tend to become *less*, rather than more, depressed, which is clearly an unexpected result of this analysis.

Table 1

Work Status and Personal Control Analysis

Between Subjects Effects		Within Subjects Effects	
Model Type	Work Status(W) p	Time(T) p	W x T p
Basic Model with no Control Variables As Covariates	.010	.128	.703
Covariates Added to Basic Model For Control Purposes Only if they Meet the Key Covariate Assumptions Noted in the narrative, With this set of Control Variables including Age, Gender, Race, Health, Marital Status, Social Support, Economic Hardship, and Education, all for Time One.	.043	.725	.696
Physical Activity And Occupational Prestige Added to the Set of Covariates in The Model Directly Above, Even though they did not Demonstrate a Homogeneity of Regression Slopes.	.048	.357	.652
In an "All-Inclusive" Model, Control Variables are added to The Set of Covariates In the Model Directly Above for Time Two as Well as for Time One, Even though, as noted in the narrative, they may further lessen the Integrity of the Analysis	.049	.125	.538

Table 2

Work Status and Depression Analysis

Between Subjects Effects		Within Subjects Effects	
Model Type	Work Status(W) p	Time(T) p	W x T p
Basic Model with no Control Variables As Covariates	.407	.461	.053
Covariates Added to Basic Model For Control Purposes Only if they Meet the Key Covariate Assumptions Noted in the narrative, With this set of Control Variables including Age, Gender, Race, Health, Marital Status, Social Support, Economic Hardship, and Education, all for Time One.	.481	.332	.051
Physical Activity And Occupational Prestige Added to the Set of Covariates in The Model Directly Above, Even though they did not Demonstrate a Homogeneity of Regression Slopes.	.314	.464	.057
In this Model Control Variables are added to The Set of Covariates In the Model Directly Above for Time Two as Well as for Time One, Even though, as noted in the narrative, they may further lessen the Integrity of the Analysis	.334	.580	.025

4.4 TREND ANALYSIS

In looking at trends, one key finding regarding control is that one group out of the three work status groups - those who moved from work to retirement during the three year period between 1995 and 1998 actually show, as reflected in Chart 1, a modest increase in their sense of personal control. The other two groups, however, show a modest, though not significant downward trend over time. And also of note here, is that the work to retirement group actually shows the lowest sense of control at Time One of any group.

And in next focusing on depression, another surprising trend emerges, which is that the work to retirement group actually shows a decrease in depression, while the other two groups show an increase. This relationship is perhaps best reflected in Chart 2, and would seem to be unexpected in the same way as was the work to retirement finding for control, in that control was expected to decrease as individuals moved from work to retirement, and depression to increase.

One final non-parametric test was then done which was the Wilcoxon Signed Rank Test, and which, as Pallant (2006, p. 293) suggests can be used as a "non-parametric alternative to the repeated measures t-test" which "converts scores of the continuous variable" - which in this case is depression - "to

ranks and compares them at Time 1 and Time 2." In conducting this test, then, each work status group is tested separately, with the work to retirement group being significantly less depressed, with $Z = -2.16$ and $p = .03$. Neither of the other two groups, though, is even close to a significant change.

Chart 1

Estimated Marginal Means for Basic Control Model

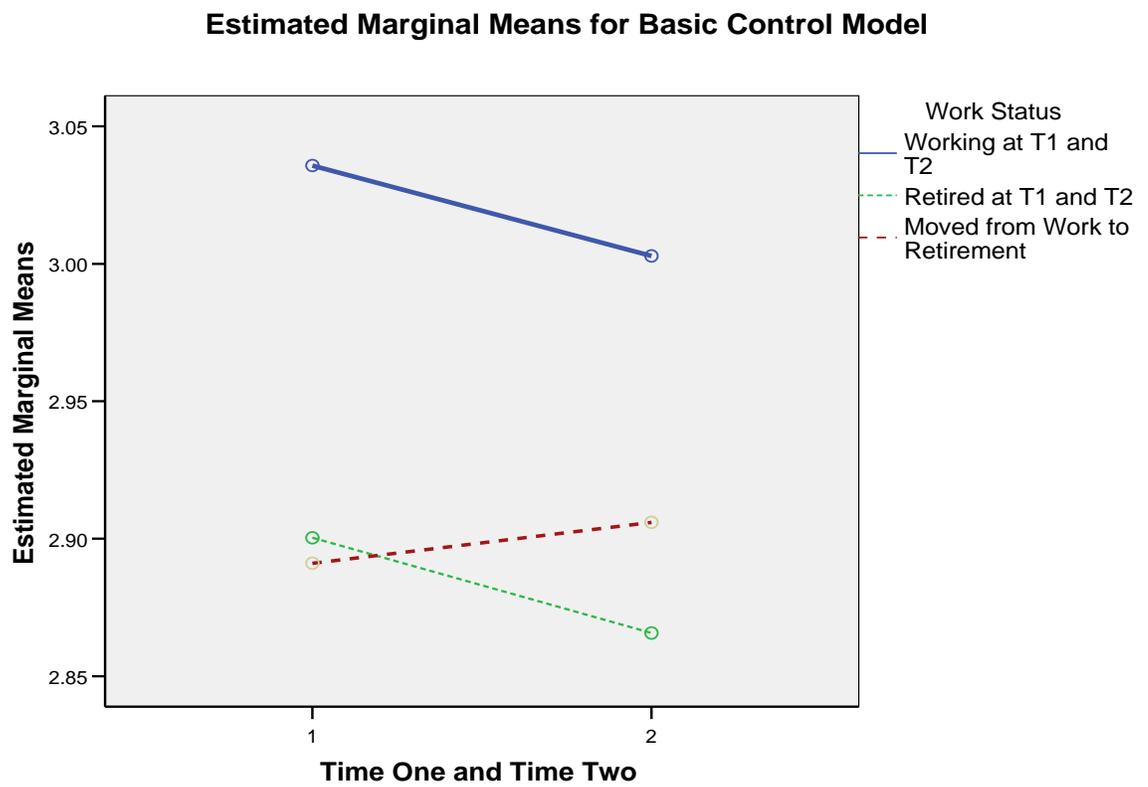
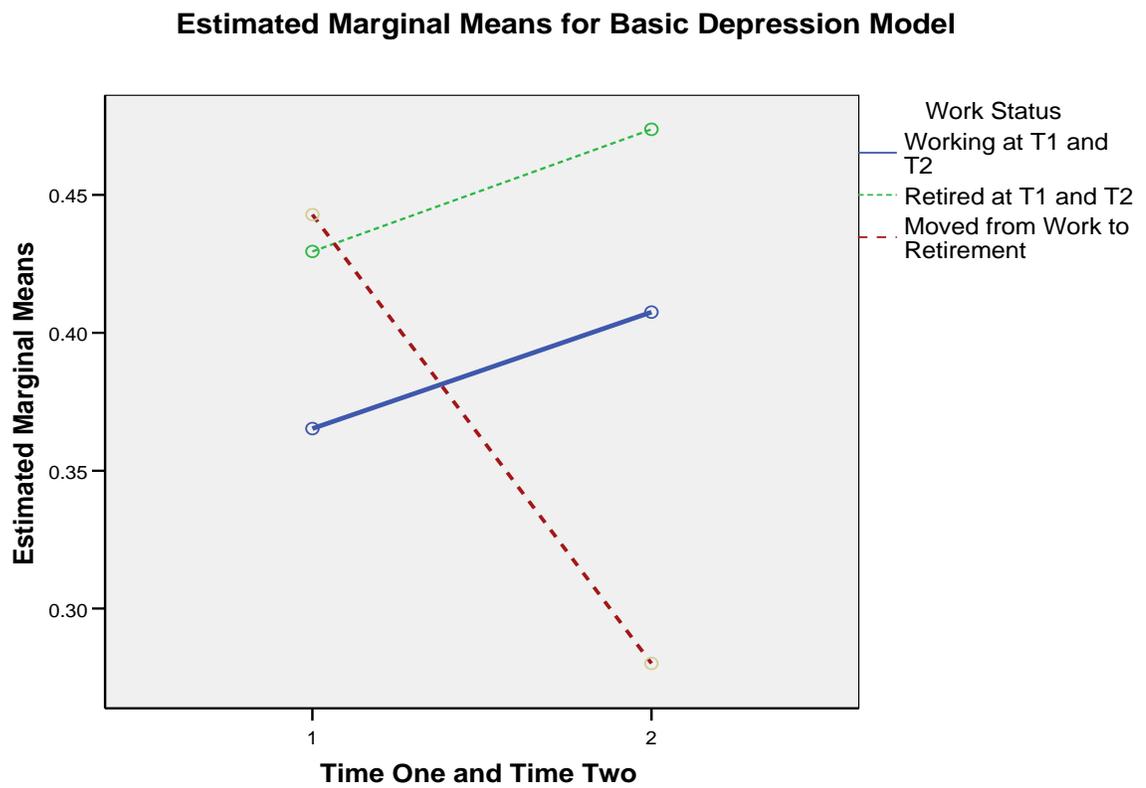


Chart 2

Estimated Marginal Means (log transformed) for Basic Depression Model



5.0 DISCUSSION

In seeking to most fully understand the meaning of the analysis above - and also its potential insights for ongoing research centered on aging and retirement - it may be helpful to briefly summarize a number of key findings, and to relate these findings to expectations fundamental to this study.

One key expectation was that retirement would prove disempowering to individuals via both a lessened sense of personal control and more extensive depression. For personal control this expectation appears to be validated, with a general finding in each model that work status was, indeed, significantly related to an individual's sense of personal control, as summarized in Table 1, and as graphically depicted in Chart 1 for the most basic model, with all other control models consistent with the same trends/graphics. For depression, however, as reflected in Table 1, no such relationship was found. And perhaps of even greater importance, however, than the general findings is that for personal control - where those

working at both Time One (T1) and Time Two (T2), along with those retired at both times, showed a slightly downward trend in their sense of personal control over the three years - those who moved from work to retirement during this same time period, actually - and surprisingly - exhibited, as graphically depicted in Chart 1, an increase in their sense of personal control over these three years. And just as surprising was a similar type dynamic for depression, where those moving from work to retirement actually showed a significant drop in depression, while the other two work status groups, as depicted in Chart 2, moved in the opposite direction.

A second expectation, consistent with those who suggested a greater need for research in aging framed by theory rather than the problem-driven dynamic of much aging research thus far, was that a theoretical frame - and in this case social learning theory - would prove helpful in both shaping the research and better understanding findings. And, clearly, social learning theory did, as is evident throughout this study, contribute to establishing both the premises of this research, and in the selection of variables. But here, too, a key surprise was in just how significantly social learning theory has contributed to interpreting the results of the analysis, and most specifically in the way it helped in drawing insight from the two surprising trends for both personal control and depression for those who

moved from work to retirement during the three year time period of the study. And perhaps most fundamental here is the social learning theory contribution in helping to highlight the potential importance of the meaningful environment in the workplace prior to retirement, and the need to better understand that environment in designing future research in this area. And also of note is that very recent scientific findings from brain research demonstrate just how such disempowering attitudes and sense of self - within the context of social learning theory and the meaningful environment of the workplace - might be shaped via extremely subtle and easily overlooked social exchanges in just such an environment (Coleman, 2006; Hofstadter, 2007).

A third expectation, then, was that future research - if, indeed, this study ultimately points in that direction - would continue with a primary focus on those who have retired. Instead, however, given the surprising finding that those who moved from work to retirement showed an actual increase over time in a sense of personal control - even in the face of an overall significant relationship between work status and a sense of personal control and a lessened sense of control for those retired - in the same surprising way that those making the same move exhibited a significant drop in depression, it seems at least possible that the "meaningful environment" of the workplace prior to retirement should be a key part of any future

research in this area. One possibility, then, is that not only is the workplace for at least some individuals promoting not only a lessened sense of self and well-being, but also that retirement, itself, may partially result from that, and in so doing lessens not only the well-being of these individuals, but also of the society which must in one way or another seek to sustain them during what is an increasing long period of non-productivity.

And one final and very broad expectation was that findings in this study would support the value of research in this area, along with making the case that contributing to this value is at least the possibility that a potentially serious risk may exist both to the well-being of at least some individuals who find themselves in this relatively new "role-less role" of retirement, and to a society which will find it increasingly difficult - and probably impossible - to sustain an increasingly non-productive population of such retired individuals. And this, too, seems to have been confirmed, especially with regard to the value added by both a theoretical frame and a longitudinal design.

Clearly, then, this study has, as noted, encountered some surprises, along with a failure to confirm every hypothesized relationship. But even so - with the findings of a link between work status and personal control, along with the possibility

that the workplace environment, itself, may be disempowering workers and creating an incentive for at least some of these workers to retire - there seems to be at least a reasonable probability that the risks to both the well-being of individuals and society may be real, and very foolish to ignore.

And in asking why scholars such as Graebner (1980) even boldly predict that retirement may ultimately "disappear," it is likely, it seems, that a number of disciplines, such as social work and economics are destined to converge in helping to both understand and resolve these potential risks to well-being. One such intersection may even be glimpsed in a classic work by Fisher (1977), *Growing Old in America*, in which he notes both an economic and social evolution in aging in America. In looking primarily at economics, he notes the American evolution from a land-based agrarian economy, in which the elderly maintained power and influence via their ownership of the land, to an economy based on market-driven capital investments, in which the elderly eventually came to be perceived as less productive, and thus at the same time less worthy. In a highly competitive integrated world economy, however, in which experiential human capital emerges as perhaps more important in many cases than buildings and machines, those old enough to have accumulated this expertise and experience may once again come to be understood as a valuable productive resource. And as that

happens, their role in preserving and passing on values and culture may also once again emerge as one which brings with it regard, and even "veneration" - rather than disdain - as values and character become central to both recognizing risk and meeting the consequent and very serious challenges flowing from that risk.

5.1 ANALYSIS OF PERSONAL CONTROL FINDINGS

In looking at the first key question in this study, which relates to the relationship of work status to a sense of personal control, the results, as detailed in the previous chapter, seem to indicate that such a relationship may, indeed, exist, and in so doing pose a risk to the well-being - in an Aristotelian sense of "self-actualization" - to individuals as they age and retire.

For the most basic relationship of work status - defined as 1) working at both Time One (T1) and Time Two (T2); 2) retired at both times; and 3) moving from work to retirement between T1 and T2 - to a sense of personal control, the estimated marginal means for those retired at both time periods, or for those moving from work to retirement, are not only lower than those

working at both times, but significantly lower. Surprising here, however - as noted above - is the actual upward trend, as depicted in Chart 1, in a sense of control for those moving from work to retirement. Clearly, this then means that with no potentially confounding variables included, work status for those who began this study in the range of ages between 56 and 71 is significantly related to their individual sense of personal control, and in the direction predicted. And even when the control variables are added in a second model which meets the two key assumptions/guidelines for covariates, as also discussed above, the relationship of work status to a sense of control remains significant, with trends similar to those reflected in the basic model.

The rising trend, however, for those who moved from work to retirement cannot be ignored in seeking to understand these results, and may mean 1) that the sense of personal control for these individuals was already being diminished in the meaningful social environment of the workplace; 2) that various disempowering social interactions may have not only diminished the individual's sense of personal control, but also comparatively lessened the value/rewards of the work role/identity, itself; and 3) that moving out of a possibly disempowering work environment actually contributed - at least

over the three-year period analyzed - to a modest increase in a sense of control.

And in further understanding the possible dynamics of such a potentially disempowering workplace environment, modern science - via tools such as the functional MRI, which can detect even the firing of neurons in various patterns - provides intriguing insight, with one such insight relating to the relative potent messages of even subtle social exchanges (Coleman, 2006). Just one example here is that each of 18 different types of smiles conveys its own very subtle message, as do a myriad of other social transactions, such as where a person's eyes focus during a conversation. And, of course, older workers often encounter, as noted extensively in the ethnographic research cited above - and even by the lady who (highlighted in the Preface) recounted in her "Turn" in *Newsweek* feeling demeaned in a home improvement store - much less subtle messages reflecting bias and discrimination.

In seeking to interpret these results, then, within the context of social learning theory, it seems that a number of explanations/premises of interest emerge, including 1) the work role, for many, may, indeed, contribute to a sense of personal control, with the loss of that role leading to disempowerment via a lessened sense of personal control, with other factors, such as social support, economic security, or good health not

compensating for role loss within the meaningful social environment; 2) movement out of the work role may result from potentially disempowering social exchanges/transactions within the work environment, itself; and 3) that an escape from a work environment with diminishing valued rewards may lead, at least for a time, to an increased sense of control.

In a more general sense, it may also be presumed that outcomes over time - including in areas such as weight loss, health promoting activities, and even in the capacity to work and build an "encore" career - will be lessened, consistent with the "generalization" of a sense of control, and the extensive body of research relating higher levels of personal control to better outcomes in these domains, as well as many others.

5.2 ANALYSIS OF DEPRESSION FINDINGS

The second key question in this study was on the relationship of work status to depression, which - in a general sense - seemingly produced exactly opposite results from those for control, with work status clearly not significantly related to depression in any model. There clearly, however, was a close to significant interaction effect for the within subjects factors

of work status and time, which is reflected in both Table 2 and Chart 2, and which led to further analysis which found a significant - and surprising - decrease in depression for those moving from work to retirement.

5.3 MEANING OF THE RESULTS

The results, as discussed above, would seem to be meaningful in four key ways - one anticipated and three not anticipated. The anticipated result clearly was that there is a significant relationship between work status and a sense of personal control, even as intrinsic personal attributes, such as age, gender, and race are entered into the model, along with other both acquired and external factors, such as health, marital status, social support, economic hardship, and education. The first unanticipated result, however, was the lack of a significant relationship between work status and depression, with two additional unanticipated results - which may perhaps be the most important contribution of this analysis - being the surprising increase in a sense of control for those who moved from work to retirement between Time One and Time Two, along

with the equally surprising decrease in depression for that same group.

In turning first to the relationship of work status and personal control, it seemingly does support - especially given the follow-up analysis of only those who were working at both Time One (T1) and Time Two (T2), and those retired at both time periods - the fundamental premise of this study, which is that retirement does, indeed, carry at least some risk of disempowerment via a lessened sense of control for those in retirement. Logically, then, it would also seem to follow that life outcomes generally, including the ability to cope with the various challenges of aging, along with the ability to engage in activities such as health promoting behaviors, continued work, or even the building of "encore" careers - given the social learning theory premise of generalization - would be diminished. The ultimate result, then, would seem to be that both the individuals so affected and society suffer. For individuals suffering a diminished sense of control via a relatively new and at least somewhat arbitrary social institution - retirement - the cost is both a diminished sense of well-being, along with the social injustice of not being able to live their own life, as Lent notes, to its fullest in what he notes to be an Aristotelian sense. And the cost, both social and economic, even

now seems to be threatening society via lost productivity and the challenge of supporting non-productive individuals.

In next looking at the failure to establish the general link between work status and depression, it would seem that these results must to at least some extent be considered inconclusive, given both the within subjects interaction of work status and time, and the clearly significant decrease in depression for those moving from work to depression, as opposed to the increase for the other two work groups.

And most importantly, perhaps, as already noted, the increase in a sense of personal control along with the decrease in depression clearly seems to suggest that any such longitudinal analysis - again framed by social learning theory - should bridge two meaningful environments: of both the workplace and of retirement.

5.4 POTENTIAL BENEFITS

In light of the above noted findings, especially with the possibility of exploring more fully the potentially disempowering social environments and rewards of the workplace, itself, there would seem to be a number of potential benefits

both to individuals and society in better understanding the dynamics of both the transition to retirement, and retirement, itself, as well as the myriad potential impacts of this relatively recent social institution on long-term individual and social well being. To realize some of these potential benefits there clearly would need to be both extensive and challenging policy debate - such as that reflected even now in observations noted earlier by both Bernanke (2006, 2007) and Walker (2007) - while other benefits might be realized in a much more operational way.

Among operational changes - which in the near future may be driven more by economics, and especially by the need to stem an impending loss of human capital, than a sensitivity to social justice - are efforts to better understand and alter the social dynamics of the workplace environment. One such response might be to design programs to include individuals as they age in training programs, or to retrain these individuals if a job-change may prove beneficial to both the individual and the institution. At the same time, then, rather than subtly encouraging such individuals to retire as they age, institutions - including the government via policy change - might seek to identify various incentives to delay retirement. This, then, and at the margins, in an economic sense, not only uses already existing "human capital" to produce badly needed "social

capital," but at the same time lessens the projected risk to other fundamental social institutions - such as Social Security and Medicare.

Another key insight on longer term benefits relates to findings in the literature on the economic challenges faced by individuals as they age. Clearly, as Costa (1998) notes, such economic hardship is not a major factor now for older individuals, but, according to Dychtwald and Kadlec (2005), is very likely to become such for baby boomers and those who follow, who have not only saved at historically low levels, but also accumulated historic amounts of debt. Bernanke (2006), however, in his recent speech to the Washington Economics Club, suggested that baby boomers and others as they age may very well - given "increased longevity and health - want to keep working. And if enlightened incentives, as well as operational supports are created, as noted, to help make this possible, not only will the economic prospects of individuals as the baby boomers age be improved, but also the prospects of the supports - such as Social Security and Medicare - which have proved so important to the viability of society as a whole.

But perhaps in turning to the other dimension of well-being at issue here - the well-being of the society upon which we all depend - it is important, also, to recognize that major benefits can flow from marginally incremental steps, with the *USA Today*

lead editorial - referenced in the "Preface" - only one example of what this may mean, in that a very modest and gradual adjustment in the time of retirement to the age of 70 can produce significant benefits. And this, perhaps, then, helps point to the common ground between individual and group well-being. Not everyone needs to shift their retirement date for benefits to be realized, with only those who might find this adjustment empowering perhaps holding the answer to both problems. Society, then, and the social work profession which specifically seeks to serve that society, clearly should be thinking about how to make this happen, both in terms of research and the application of that research, and to do so with perhaps the same "marginal" mind-set as both economists and policy-makers.

5.5 NEXT STEPS

5.5.1 More Fully Explore the Potential Contribution of Current Brain Research to Social Learning Theory

In the very recent past, as noted above, research on the brain using tools such as the functional MRI, have allowed researchers to determine that neurons in the brain fire in various patterns as the result of various types of social exchanges in an individual's meaningful psychological environment - as highlighted by Rotter (1982) in his earlier writings on social learning theory - including messages delivered in such subtle ways simply via touching (Coleman, 2006). These patterns of neuron firings, then, according to researchers such as Hofstadter (2007), not only through repetition distill as symbols, and thus become a foundation for thinking, but also influence an individual's sense of self. And even though this research is very new, it clearly would seem to have the potential to add both credence and depth to social learning theory, making it a potentially even more valuable tool in applying a theoretical frame to ongoing research in confronting the challenges of aging, including the various challenges inherent in the social institution of retirement as now defined.

5.5.2 Design a Study Which Bridges the Transition from the Workplace Environment, Itself, to Retirement

Given that a key unexpected outcome of this study was that the trend for a sense of personal control for those moving from work to retirement was slightly upward at the same time that their sense of depression significantly decreased - and that the potential implications of this finding may point to social and psychological dynamics in the workplace, itself - it could be very valuable - especially given the potential risks, as discussed throughout this study, to the well-being of both the individuals affected and to society generally - to better understand if 1) the meaningful environment in the workplace, as defined by social learning theory, is not only creating an incentive for these individuals to leave, but is doing so by lessening their sense of personal control; and 2) to better understand the dynamics of this "pre-retirement" process, if indeed this proves to possibly be the case. An essential next step, then, would be to seek out organizations - who very well may have pre-retirement programs - to partner with in conducting such a study, with a key challenge in doing so to convince these

organizations that they have much to gain from such research, just as they may have much at risk now. A further challenge, then, would be to ensure both racial and gender diversity in establishing a methodology for sample selection, while at the same time establishing a process for ongoing contact and evaluation of these individuals as they move into retirement - or even if they ultimately continue to work.

5.5.3 Develop a Domain Specific Control Scale for Pre-Retirement Research in the Workplace, as well as for Retirement

To most effectively pursue research relative to work status and a sense of personal control - both for those who might be classed as "senior citizens," either in the workplace, or in "retirement" - a domain-specific scale may prove of value. Bandura (1997), in particular, has stressed the value of measuring a sense of self-efficacy - which as noted by Pearlin and Pioli (2003) is one of many ways in which to characterize a sense of personal control - via just such a domain specific instrument. In doing this a first key step would be to very specifically define the domain of interest, with qualitative research probably essential in this process. A clear first step,

then, would be to partner with a number of organizations which may stand to gain from such research, as noted just above, and in so doing to identify a diverse - especially as defined by race and gender - group of individuals 55 and over within those organizations who may wish to take part in focus groups, and who then may be willing to also take part in extensive interviews. The focus of these group meetings, along with the individual interviews, would then be on identifying to the extent possible in just which ways these individuals experience their meaningful environment in the workplace and in retirement, and the variety/types of social exchanges which take place and prove meaningful in these environments.

5.5.4 Design a Longer/Ongoing Longitudinal Study which would focus on Work Status and a Sense of Control

A good model here, perhaps, is the Harvard Study on Adult Development (Vaillant, 2002) which has tracked three different groups of individuals as they have aged over a period of more than 50 years, and which has clearly used procedures and techniques - such as face-to-face interviews - to promote ongoing participation. To actually implement such a design would

without question prove just as challenging as the Harvard study clearly has been, but with adequate support from those in our society who increasingly recognize the value of a need to better understanding the "opportunities" of "aging," such an investment might ultimately prove well worth the cost.

5.6 LIMITATIONS OF THE STUDY

One fundamental limitation of this study - given the ultimate focus on better understanding factors and experiences which may have contributed to the surprising increase in a sense of control for those who moved from work to retirement, along with the significant decrease in depression for this same group - is the relatively small number of individuals (N=30) for this group in the sample used. And a second - and equally fundamental limitation, especially given past research cited in the Literature Review - is the very small "N" for those designated as "non-white" in this sample, and the lack of racial diversity reflected in that unfortunately small number. And in a more general sense, given the key insights and questions which emerged from even the limited longitudinal nature of this analysis, the study would benefit from a longer period of

analysis. And finally, given the surprising findings relative to those moving from work to retirement, it would have been helpful to have the actual date of retirement for those individuals.

APPENDIX A

ASOC QUESTIONNAIRE TOPICS

Physical Health

Subjective health; height and weight; difficulty climbing stairs, kneeling or stooping, lifting or carrying, doing household work, shopping or getting around, seeing, hearing; ever diagnosed with heart disease, high blood pressure, lung disease, breast cancer, other cancer, diabetes, arthritis or rheumatism, osteoporosis, allergies or asthma, digestive problems; days in past week with headaches, backaches, other aches and pains; days in the past week had lots of energy, felt physically fit; expected personal longevity.

Mental Health

Days in the past week had sleep problems, everything was an effort, could not get going, had trouble concentrating, felt sad, felt lonely, could not shake the blues, enjoyed life, felt

hopeful about the future, felt happy, worried a lot, felt tens, felt restless, feared being attacked, worried about house being broken into, felt annoyed, yelled at someone, felt angry, felt it was afeer to trust no one, felt suspicious, felt sure everyone against you.

Health Behavior

Frequency and distance of walking; frequency of strenuous exercise; current and past smoking; frequency of eating meat, fruit or vegetables, fries or potato chips, cookies or candy or cake or doughnuts, skim or low fat milk; alcohol quantity and frequency.

Use of Medical Services

Medical insurance coverage and payer; time of most recent hospitalization; number of doctor visits in the past year; number of prescribed medications.

Work Status

Current employment status (full-time, part-time, keeping house, retired, unable to work because of disability, temporarily unemployed or laid off, going to school) and length of time in current status; title of current job or occupation & job description (Census occupation codes linked to occupational

status scores and Labor Department ratings of occupational requirements and strains); types of work, tasks, or activities; degree that one's work or daily activity is routine, enjoyable, chance to develop and learn new things, solve problems, interact with people I like, would recommend my job to a friend; have a supervisor, supervise others; can disagree with supervisor; who decides what you do, how you do it; management position and level; work history (never full time, mostly full time, full time periodically, full time a while then quit); date of last full-time job, reason for resigning.

Sense of Control

Extent of agreement or disagreement that if something good is going to happen it will, there is no sense planning a lot, the good things that happen are mostly luck, I am responsible for my own successes, I can do just about anything I set my mind to, my problems are mostly the result of bad breaks, I have little control over the bad things that happen to me, my misfortunes are the result of mistakes I have made, I am responsible for my failures, I am often a victim of things I can not control, I can survive and overcome most bad things, A lot of my problems are cause by others.

Social Support and Participation

Have someone to turn to for support and understanding, someone I can really talk too, someone who will help out, someone who would take care of me I sick; frequency of visiting friends or neighbors, doing volunteer work, participating in neighborhood or community service.

Personal and Household Demographics

Household's number of adults 18-59, number of adults ≥ 60 , children < 18 ; age of youngest child in household; relationship to 1st, 2nd, & 3rd oldest adults in household; current marital status, lifetime number of marriages, age at first marriage, time since last marital transition; mother still alive, father still alive; number of children have had, age when first child born, year of own birth, born in US, age when came to US, English as first language, Hispanic, race

Marital and Family Relations

How much would like to get married (remarried) some day; happiness with current relationship, frequency of thoughts of leaving; degree of influence in major household decisions; fraction of household tasks one does, average hours per day spent on household tasks, fairness of share of housework; spouse/partner's employment status and education.

Socioeconomic Status

Father's and mother's highest grade of school or degree; own highest grade or degree, name & place of college (linked to data on selectivity, status), discipline of highest college degree, year completed education; frequency of difficulty in past 12 months buying household necessities, paying bills, paying for medical care; past economic difficulty (and how long ago); own home versus rent; personal income, total household income.

History of Adversity

Home or apartment broken into, attacked or assaulted, in a major natural disaster; ever unemployed more than 6 months when wanted a job (how long ago); time when did not have money for clothes, food, rent, bills or other necessities (how long ago); parents divorced or a parent died in one's childhood; age when mother died, age when father died.

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