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2010 SSS Presidential Address: The Devolution of Risk and the Changing Life Course in the United States

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Abstract

Recent patterns of labor exit in late life in the United States are increasingly heterogeneous. This heterogeneity stems from diverse employment careers that are emerging in the workplace where job security is declining. Individuals’ structural locations in the labor market expose them to diverse risks for employment and income security at older ages. Among those risks are access to institutional mechanisms for retirement saving and the requirement to assume full responsibility for decisions about retirement savings that involve market risks. The spread of these individualized pressures to invest in retirement has elevated the importance of financial literacy in the 21st century. Late employment careers and patterns of financial literacy are studied in this article using the premier U.S. longitudinal dataset from the National Institute of Aging, the Health and Retirement Study initiated in 1992, which is linked to restricted Social Security earnings records that extend over several decades. These merged data afford the opportunity to observe continuous work histories in this sample from 1981 through 2006 to identify latent trajectories of employment in late life. In addition, a supplementary module attached to the 2004 wave of the HRS provides valuable information on the financial literacy of subgroups. The work-retirement trajectories and financial literacy patterns observed reflect persistent patterns of inequality amplified by modern risks in the labor market.

Global changes in population aging, the geographical reorganization of labor markets, employment security and governmental policies related to employment and retirement are exerting pressure on the regulation of the retirement transition worldwide that is pushing for later retirement ages and privatized mechanisms for retirement saving. A master trend towards the devolution of risk is placing more and more responsibility on workers and their families for income security as collective mechanisms for risksharing and risk-spreading are being dismantled. One consequence of this master trend is the shift away from a standardized and absorbing age-related transition from employment to retirement incomes for populations across countries and towards more heterogeneous patterns of labor exit that are linked to diverse lifelong employment patterns across subgroups of the working population (Quinn 2002; Warner and Hofmeister 2004; O’Rand and Hamil-Luker forthcoming). Multiple patterns of partial and gradual retirement that mix part-time, full-

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time and intermittent employment in late life with public and private pensions are more and more common in the United States. Moreover, a new trajectory of “unretirement” (Maestas 2005) – or the return to work after a period of retirement on a pension or pensions well into the post-retirement years – is increasingly evident among recent retirees.

This article identifies recent patterns of labor exit in late life in the United States and explores the influence of structural location in the labor market on the allocation of individuals to diverse labor exit patterns. It also examines risks related to financial literacy in the 21st century as more and more responsibility for financial planning for retirement resides with individuals and families as employers and governments retreat from traditional programs of income support in old age (Hacker 2006).

Risk

The idea of risk extends back as far as the Cliffs of Scylla in Homer’s *Odyssey* and several centuries later to the hazards of sea trade encountered by Portuguese sailors (Bernstein 1996). These antiquated conceptions referred to exogenous risks to which all human beings were equally vulnerable, not to endogenous risks stemming from individual behaviors and decisions. The latter theories of risk dominate economics today, where risk is the object of considerable attention. Risk is generally defined as a state of uncertainty in which possible alternative outcomes of a decision or event involve differential levels of gain or loss. The calculus of risk is a combination of the likelihood of an exposure to a hazardous or rewarding event or condition *and* the potential degree of loss or gain from such exposure.

Prospect theory in economics has guided research for three decades in calculating the extent to which individuals make choices on the bases of relative costs and gains in day-to-day decision-making (Kahneman and Tversky 1979). The most persistent observation in these studies is that individuals assume greater risks to avoid costs than to achieve gains. Moreover, in situations of “intertemporal choice” – i.e., in which the timing of benefits and costs are spread over time – the tendency is for the putative averseness of future loss to supercede the value of future gain. Put more colorfully, the mental frame of “dread” appears to eclipse that of “savoring.” (Loewenstein and Thaler 1989) In addition, the level of uncertainty about the (especially distant) future presents its own cost; contingent planning is “costly” in the context of ambiguity and leads individuals to resolve their uncertainties sooner rather than later without sustained regard for loss or gain (March 1978).

Recent considerations of risk in economics have moved somewhat beyond this individualistic rationale to account for responses to some of the unexpected events and market failures of our time. These follow two lines of argument: one focuses on the retrospective predictability of “rare but high impact events” such as the 9/11 attack on the World Trade Center (Taleb 2007 refers to these kinds of events as black swans) and the second to the irrationality of population behavior in unique economic contexts labeled, for example, as “irrational exuberance” and “animal spirits” arguably apparent according to some economists in the most recent global financial crisis (see Akerloff and Shiller 2009 on animal spirits including confidence, corruption, bad faith, illusion, etc.). Both of these departures from traditional economic theory permit the consideration of the independent

impact of macro-economic exogenous factors on economic behavior that include the unpredictable effect of history in which traditional considerations of rationality do not apply and the sociological influence of non-rational collective behavior on individual decision-making.

Sociologically-motivated approaches to risk focus on exogenous structural factors (Heimer 1988). Diverse economic and related risks are unequally distributed in stratified populations on the basis of age, class, race, gender and other status categories and lead to cumulative disparities in well-being within populations over time. Rare and high impact events or conditions have differential effects on subgroups of the population: disease, poverty, war, recession and natural (and man-made) disaster impose higher relative costs from the most vulnerable populations and constrain their options most severely and, often, enduringly. Social structure also mediates perceptions of risk, such that the estimation of risk may be quite different across social positions. A plant-closing and factory relocation, for example, elicit quite different risk perceptions for workers and employers, respectively. Unemployment and income loss concern workers, while employers face market risks related to worker compensation (especially with respect to long-term pension promises) and quarterly earnings reports to their stockholders. Hence, risks can be “noncomparable” (Douglas 1986) and perhaps in direct conflict across groups.

The new workplace is a critical site of noncomparable risk, a “brave new world” according to Jacoby (2001), in which risk-spreading and risk-sharing between employers and workers is disappearing as employers retreat from practices that long served to stabilize domestic workforces and provide worker security (Shuey and O’Rand 2004). As such, the workplace in the United States and other advanced countries has become more precarious and insecure for workers (Kalleberg 2009). Technological change has accelerated over the past four decades and enabled global competition among companies. These changes have increased the value of flexibility for employers who prefer, and who can now manage, highly dispersed labor forces to reach larger markets for their products and services. The choice between flexibility and job security has swung strongly in the direction of the former for employers, with little indication of a rebound to job security for large segments of domestic U.S. workers (Kalleberg 2009).

The U.S. Retirement Context: A Liberal Model with Growing Uncertainty for Workers

Modern societies developed institutions over the 20th century to manage risks through risk-spreading and risk-sharing mechanisms based largely on the state’s power to tax and allocate resources to public goods, such as education, health and income adequacy. However, these institutions or welfare regimes vary considerably across countries in the levels of support they provided to individuals and families facing life course risks. The United States is characterized by a liberal model of public institutions that intervenes in the market in a very limited fashion (Esping-Andersen 1999). With respect to retirement, the (pay-as-you-go) Social Security System is based on the employment system and is accompanied by a modest supplemental security system for the indigent.

Occupational pensions of any kind are unevenly available across the public and private sectors. Only half of all workers in the private sector have ever been offered private pensions on an annual basis (Munnell and Sundén). And, since the 1980s, private employers have increasingly withdrawn from pension and health insurance coverage offers altogether or shifted more collective plans to individualized plans. Medicare/ Medicaid programs primarily cover the oldest members of the population, but only 7 to 8 out of every 10 workers have been covered by public or private health insurance at any one time (Institute of Medicine 2003).

For workers covered by pensions, three categories of plans are available: defined contribution, defined benefit and hybrid plans (Thompson 2006). DC plans have overtaken DB plans as the major pension instrument in the country; the former account for 8 percent of all pension plans. DB plans promised a fixed annuity for life based on final earnings levels and years of service. DC plans take several forms. They may be deferred profit sharing or employee stock ownership plans (Munnell and Sundén 2004), which proliferated in selected sectors in the 1990s but because of their vulnerability to corporate bankruptcy have been restricted since 2003 (recall the Enron scandal).

The most prevalent form of DC plans consists of investment accounts (401ks) to which workers contribute a percentage of their monthly or weekly earnings; these plans are often, but not always, matched at some level by employers. They appeal to workers because they are portable and tax sheltered until distribution begins, and they can carry loan options (with strict repayment schedules and penalties in the case of default). Workers must decide on the percentage of their earnings to contribute and then choose how to allocate their contributions across equity and bond options. Upon retirement, these account balances can be paid as lump sums, rolled over into other retirement instruments or distributed following variable or fixed (or mixed) annuity arrangements. As such, DC plans epitomize the devolution of risk since they place full responsibility on workers to deal with market risks.

Defined contribution plans fall into a “two-tier pension system” with higher paid employees benefiting from hybrid DB and DC plans and rank and file workers limited to DC plans (Munnell and Sundén 2004). Hybrid plans provide options that approximate either cash balance accounts similar to DC plans or target benefits that are calculated to generate predictable returns in the same manner as DB plans. Legislation since 2003 has imposed limitations on cash balance plans and halted their expansion because many older workers were being shifted out of DB plans to new DC plans that imposed serious reductions in their retirement resources.

The financial risks to which DC plan participants are exposed are large. Workers with equivalent work, wage and investment histories can face quite disparate financial environments (stock market return, bond interest rates and inflation levels) over time, and retire with similarly disparate fortunes. Depending on the financial environment immediately prior to a planned retirement, the income stream in retirement can vary considerably in its ratio to pre-retirement income (Burtless 2004). The recent reversal of the trend towards earlier final retirement has been attributed to the prominence of these pension plans in the economy (Munnell and Sundén 2004), where one estimate predicts that DC plan coverage

delays retirement two years longer than DB plan coverage (Johnson 2009) and another predicts that it increases the likelihood of returning to work following retirement (Maestas 2005).

Employment, Unemployment and Retirement in the Workforce

Employers' decisions regarding restructuring through layoffs, outsourcing of labor, preferences for contingent workers and fixed-term contracts, wage adjustments, furloughs, and pension and benefit offers are far less regulated than those in Europe. The decline of unionization and the deregulation of some industries have further shifted firms' allegiances towards shareholders and away from workers (Levy 1999).

These trends have increased job insecurity, which has spread from the manufacturing sectors beginning in the 1970s to the lower-and higher-end service sectors by the 2000s. Macro-economic shocks have also increased in frequency over this period exposing workers to seemingly continuous risks for job loss. The least advantaged workers – i.e. minorities, the less educated – are at highest risk of unemployment and longer durations of unemployment (Flippen 2005; Elman and O'Rand 2002; Shuey and O'Rand 2004). Less stable work patterns, more job mobility and more frequent unemployment spells, high rates of part-time work and multiple job incumbency are more prevalent among these groups. These workers are also less likely to be covered by occupational pensions and health insurance over their careers.

Unequal experiences with job security have generated multiple pathways to retirement. Intermittent work histories and poorer health earlier in life increase marginal workers' risks of disability, job loss and lower prospects for reemployment (Flippen 2005); this risk, in turn, can increase the rate of "early retirement" through worker discouragement and also increase the rate of re-employment because of the need to return to work to maintain household income (O'Rand and Hamil-Luker forthcoming). Black and Hispanic men and women are at risk, but women are at higher risk than men across race/ethnic groups (Brown and Warner 2008). And, older workers generally face discriminatory hiring practices that increase the duration of unemployment, especially following job displacement (Johnson 2009).

Yet, older workers (over the age of 55) make up an increasingly larger portion of the labor force. In 2020–2050, a fifth of the labor force will be over age 55 (Toossi, 2002). The rate of early retirement (retirement before eligibility for full Social Security benefits) halted in the mid-1990s and then reversed, especially among older men (Quinn 1997, 2002). From 1985 until 2007 labor force participation rates of men and women ages 65–69 increased from 24 to 34 percent and 14 to 26 percent, respectively (U.S. Department of Labor 2009). And, in 2006 one in four persons ages 65–74 was in the labor force (either working or looking for work), an increase from one in five in 2000.

The reversal of the trend towards early retirement has been attributed to changes in Social Security age and earnings eligibility rules (Gustman and Steinmeier 2009), intercohort improvements in health and average educational levels (Hughes and O'Rand 2004), financial

uncertainties and under-saving in DC pensions (Munnell and Sunden 2004), and labor market insecurity related to feared layoffs and limited re-employment opportunities for older workers (Johnson 2009). Hence, higher percentages of older workers persist in the labor market or return to it after retiring – a pattern labeled “unretirement.” The most recent studies of unretirement report that nearly half of retirees since the early 1990s follow nontraditional retirement paths, with half of this group returning to work following a full retirement (Maestas 2007).

Macro-economic shocks appear to provide strong conditions for job insecurity (Burtless 2004). Our recent analyses of the effects of macro-economic shocks from 1981 to 2006 on older workers ages 50 to 75 reveal a significant impact. National unemployment rates have positive significant lagged effects on older workers’ (ages 50–75) unemployment patterns when compared to other lagged indicators, such as the S&P 500 (O’Rand and Hamil-Luker forthcoming). General unemployment rates increase the rates of unemployment among older men and women workers by a factor of 4; they also increase the rates of retirement among these workers by a factor of 2.

Latent Trajectories of Labor Exit

These trends raise questions regarding the underlying heterogeneity of the careerretirement trajectory. What are the temporal patterns of labor exit in late careers? What structural factors condition the trajectories of employment careers of different classes of older workers that, in turn, affect the timing and course of retirement from work? And what structural factors influence the capacities of workers to prepare for retirement in the new pension environment? The first question is addressed by identifying latent trajectories of work to retirement in the aging U.S. population from 1981 to 2006. The second is addressed by exploring what factors increase or decrease financial literacy among aging workers in the 21st century who must prepare for their retirements more deliberately than their counterparts from the past.

Since 1992, the HRS conducted in-depth interviews with a nationally representative sample of 12,652 adults born in the United States during the years 1931–1941. Interviews have been conducted every two years, and are ongoing. The HRS provides comprehensive data on family, health, employment and economic circumstances. For our purposes we have also linked the HRS to restricted data provided by the Social Security Administration (records of past earnings and employment) to create quarterly work and earnings histories from 1981 to 2006 as HRS respondents aged from 50 to 75. (For information about the HRS data, please see Karp 2008.)

To gain a picture of diverse labor force trajectories among older Americans, we conducted latent class trajectory analyses (Vermunt and Magidson 2008; Vermunt 2004). These models use time-varying yearly measures of labor force status for persons ages 50–75 to identify employment patterns over time. Quarterly Social Security data record whether respondents work fulltime, work parttime, are disabled, unemployed or out of the labor force.

Latent class cluster analysis, also known as group-based trajectory modeling (Nagin 2005), identifies groups of respondents who follow similar employment and retirement patterns as they age. LC cluster models assume that the overall study population is comprised of a mixture of subpopulations or *classes* (Bandein-Roche et al. 1997). For these analyses, we assume that there are a small number of distinct patterns of labor force participation across the life course. This specialized application of finite mixture modeling identifies, rather than assumes, the existence of groups of distinctive developmental trajectories and captures the connectedness of behavior over time.

Using maximum likelihood estimation and Latent Gold software, LC cluster analysis allows us to identify employment and retirement patterns that would be impossible to distinguish using sample averages. In the LC cluster model, the probability of obtaining a specific response pattern y , $P(Y = y)$, is a weighted average of the C class-specific probabilities $P(Y = y|X = x)$; that is:

$$P(Y = y) = \sum_{x=1}^c P(X = x)P(Y = y|X = x).$$

Here, $P(X = x)$ denotes the proportion of respondents that belong to latent class x (Vermunt and Magidson 2000). We estimated one-cluster models, then estimated two, three, and four-cluster models. We assessed model fit by comparing likelihood ratio chi-squared statistics, Bayes information criteria and bivariate residuals. We find that a four-cluster model provides the best fit to the data and report these results.

We summarize key characteristics of these latent trajectories in Table 1. Demographic variables include gender, age at first pension receipt, and education. We compare those who did not complete a secondary education to those with a high school (secondary) degree, some university or post-secondary vocational training, and those with a university degree. We also identify birth cohort compositions of the trajectories since succeeding cohorts have experienced changing workplace conditions and Social Security policies differently. We compare persons born in 1931–1933 and 1934–1936 to those born in 1937–1941. This decision is based on a fundamental change in U.S. retirement policies for those born after 1937. For younger cohorts, normal retirement age, or the age at which one can receive full public pension benefits, begins at age 65. For those born after 1937, the normal retirement age is gradually increased by two-month increments for each consecutive birth year. This results in a normal retirement age of 67 for those born in 1960 or later.

Because private pension coverage is likely to influence employment decisions, we compare employees with *no* private pension coverage to those with a defined benefit plan, a defined contribution plan, and both a defined benefit and defined contribution plan. Workers also may base employment or labor exit decisions on their health insurance coverage. To examine this possibility, we compare those without health insurance to those with government-provided (Medicare, Medicaid and veterans) insurance or employer-provided health insurance.

Finally, we include several characteristics of the work careers of trajectory groups including any incidence in their careers of the following: disability, unemployment, re-employment (after unemployment), no job after age 50, full-time work prior to retirement, retired (Social Security) by age 62, retired (Social Security) by age 65, unretirement after six months not working and on a pension.

Figure 1 and Table 1 depict the results of a latent class trajectory analysis that detects four common patterns of labor force trajectories as respondents age from 50 to 75. The first cluster of respondents, which we identify as *gradual retirees*, follow the most common pattern of full-time employment until the age of 62, at which time a gradual declining rate of full-time work emerges. Another 29 percent of the sample, which we identify as *early retirees*, work fulltime until the age of 62, at which time they leave the labor market and are unlikely to return. *Intermittent workers*, composed of approximately 27 percent of the sample, enter in and exit from the labor market for extended periods of mixed unemployment, disability, part-time and full-time work. Finally, 10 percent of the sample consists of *derived beneficiaries*, who receive their pension incomes primarily as dependent spouses of workers. Figure 1 depicts the cluster likelihoods of retirement as they age, underscoring the diverse ways in which Americans retire.

Table 1 provides descriptive statistics showing compositional differences across the later life employment trajectories. Gradual and early retirees are primarily college-educated white men who have the highest likelihood of working fulltime with pension and health insurance coverage. Gradual retirees, in comparison to early retirees, have a stronger attachment to the labor force even after age 65. Intermittent workers are more likely to be women of color with lower levels of education and occupational status. The majority of intermittent workers experience either disability or unemployment in their later careers, with all cluster members retired by age 65 when eligible for Medicare. Derived beneficiaries are mainly women, have lower secondary education attainment levels and weak attachments to the formal labor market. Derived beneficiaries are the least likely to have private pension coverage or health insurance, but the most likely to have a retired spouse. There are no statistically significant differences in cohort composition across groups.

Arguably, early and gradual retirees have more resources to control the timing of their labor exits such as educational attainment, pensions and employer-provided health insurance. They are less likely to have experienced unemployment or disability at younger ages; hence they approach retirement with more coherent work careers. They are more likely to “unretire,” suggesting that they have sufficient skills to be re-employed at later ages. Intermittent workers, however, have lower employment rates from earlier ages that cumulatively decline until ages of Social Security eligibility after which employment is virtually absent. That this class comprises one-fourth of the sample reveals a non-trivial level of employment insecurity for a significant portion of the working population in the decade and a half before public pension eligibility.

Financial Literacy as a New Life Course Risk

The devolution of risk has placed subgroups of the population at greater risk of job insecurity over long periods during their careers, but it has placed all workers at risk of insufficient retirement reserves because it has concurrently increased the responsibilities of workers to plan for and provide for their income security in old age (Shuey and O'Rand 2004). Financial literacy is becoming a more salient aspect of retirement planning. Structural factors related to educational attainment, job quality and access to pensions and other savings mechanisms should be expected to influence the level of financial literacy, just as they affect job stability over the work career. Here we turn to a brief consideration of variations in financial literacy.

The data for the financial literacy analysis also come from the HRS. In the 2004 wave of HRS a random subsample answered a special experimental module on retirement planning that was designed by Annamaria Lusardi and Olivia S. Mitchell (2007). Part of the module aimed to assess respondents' levels of financial literacy. Module 8 of the HRS in 2004 asked respondents three questions to ascertain their levels of financial literacy. The questions measure knowledge of fundamental economic concepts (compound interest and inflation) and knowledge of risk diversification (stock options):

Compound Interest: Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow?

More than \$102

Exactly \$102

Less than \$102

Don't Know

Refuse

Inflation: Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account?

More than

Exactly the same

Less than

Don't Know

Refuse

Stock Diversification: Do you think that the following statement is true or false?

Buying a single company stock usually provides a safer return than a mutual fund.

True

False

Don't Know

Refuse

Tables 2 and 3 report exponentiated coefficients of life course predictors of correct answers to the financial literacy questions and "Don't Know" answers to these questions, respectively. Table 2 specifically reports coefficients for correct answers to each question and for the number questions answered correctly. The overall results are that disadvantaged statuses related to gender, minority group and single marital status decrease the number of correct answers and the likelihood of correct answers to specific questions. Educational attainment, household wealth and pension coverage all increase the number of correct answers, but had different effects on the likelihood of correct specific answers. For example, years of education improved the likelihood of a correct answer to all three literacy questions and household wealth to the two questions on stocks and interest rates. Pension coverage increased the likelihood of understanding stock diversification only.

Overall, the pattern of "Don't Know" responses in Table 3 presents an obverse pattern of life course effects, though not perfectly the opposite of the correct answer results. Older persons, those with lower educations and the widowed are more likely not to know the answers to all three questions. Minority groups, the less educated, and separated/divorced or widowed person have difficulty with the interest rate and inflation questions. Similar to the findings on stable vs. unstable work careers and the timing of retirement, the impact of the advantages of education, wealth and job quality (evidenced in pension coverage) are evident in these findings.

Discussion

Nothing startling appears in these descriptive results. But, they bring into focus that the new workplace is intersecting with old inequalities in ways that may amplify the latter in aging populations. Risks are spreading across the life course and nowhere more visibly than in the workplace.

The devolution of risk requires an individual to make choices on his or her own behalf, usually with limited information about those choices and considerable uncertainty about how those choices will pan out in the future. Pensions provide a window on this process. The shift from collectively negotiated or implemented defined benefit plans to optional and individualized defined contribution plans imposes a new discipline on workers that requires a future time perspective. However, the future has become increasingly less predictable for workers and especially those in precarious labor market positions.

Since the early post-World War II period, Social Security has regulated late career exits with age-specific incentives that have been revised and adjusted as population aging has accelerated in the United States, particularly with the aging of the Baby Boomers. In the 1960s the majority of workers retired near the age of 65. When early reduced benefits at age 62 were introduced, the trend towards retirement at this age accelerated until the 1990s. Since then, age-based trajectories of labor exit or retirement have differentiated into distinct

patterns that reflect the career experiences and long-term economic fortunes of workers more than the institutional clocks of pension receipt. Many workers are effectively “left out” of the workplace long before pension eligibility is reached. Others control their schedules of retirement.

The new mix of private savings instruments (DC plans, Individual Retirement Accounts) contributes to this heterogeneity. Pension-saving is becoming a more deliberate behavior requiring contemplation well in advance of retirement ages. This demands resources and information, both of which are unequally distributed in the labor force. The case of financial literacy illustrates the problem of information in a more deliberative age. Understanding interest rates, inflation and stock diversification is directly related to educational levels and workplace opportunities; both are becoming more unequal and non-comparable.

This indicates that the devolution of risk is spreading outside the workplace as well. Educational institutions no longer reflect a logic of risk-sharing or risk-spreading. Rather, the emergence of vouchers, charter schools, home schooling and the spread of private schooling have presented to many families new choices that bear risks. These choices are made under conditions of uncertainty and often outside of systems of support or regulation. Of course, many families do not have choices, or do not perceive them, leaving them in increasingly disadvantaged positions.

These changes, and others not addressed in this study, suggest that the institutionalized life course as we came to know it in the 20th century is changing. The devolution of risk from birth until death is de-standardizing the tempo of lives and yielding different trajectories through what use to be more normative schedules experienced from childhood to old age. Education, work and retirement may follow a general sequence in lives, but the specific experiences with, and connections between, these life course phases have become highly varied. These different life experiences are further differentiated when unexpected and highly improbable things happen; disasters, economic shocks and other “black swans” disturb lives in unequal ways and further separate individuals from each other.

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Figure 1.
Percent Employed Fulltime by Age and Late Life Latent Employment Trajectory

Table 1:

Variable Means and Percentages by Later Life Latent Employment Trajectory

	Gradual Retirees (N = 3,042)	Early Retirees (N = 2,968)	Intermittent Workers (N = 2,761)	Derived Beneficiaries (N = 989)
Demographic Characteristics				
Female	.42	.46	.67	.94
Non-Hispanic white	.75	.70	.64	.64
Cohort 1 1931–1933	.24	.26	.26	.27
Cohort 2: 1934–1936	.25	.29	.26	.29
Cohort 3: 1937–1941	.51	.45	.48	.44
University degree	.24	.17	.13	.05
Some college	.22	.20	.18	.11
High school degree	.32	.35	.32	.33
No degree	.22	.28	.37	.51
Professional service occupation	.18	.11	.02	.00
Defined benefit pension	.36	.50	.56	.17
Define contribution pension	.57	.50	.44	.37
Employer-provided health insurance	.33	.25	.18	.02
Work Careers				
Ever disabled	.01	.08	.38	.10
Ever unemployed	.09	.17	.32	.11
Ever re-employed	.18	.11	.19	.01
No job after age 50	.01	.01	.01	.56
Worked fulltime prior to retirement	.87	.81	.23	.01
Retired by age 62	.36	.66	.85	.70
Retired by age 65	.87	.98	1.00	.95
Ever unretired	.24	.20	.09	.02

Note: Means in bold are statistically significantly different across later life employment clusters.

Table 2:

Factors Predicting Correct Answers to Three Financial Literacy Questions

	Correct Answer to Stocks Question	Correct Answer to Interest Rate Question	Correct Answer to Inflation Question	Number of Questions Correct (0–3)
Age in years	.986 ** (.00523)	.979 *** (.00563)	.975 *** (.00602)	.975 *** (.00470)
Female	.871 (.0828)	.850 (.0888)	.825 (.0939)	.826 * (.0707)
Black ^a	.508 *** (.0733)	.611 *** (.0887)	.715 * (.111)	.498 *** (.0616)
Other race ^a	.913 (.191)	.588 * (.128)	.538 ** (.120)	.586 ** (.109)
Years of education	1.096 *** (.0183)	1.133 *** (.0203)	1.118 *** (.0203)	1.165 *** (.0174)
Household income in \$10,000s	.992 (.0133)	1.059 * (.0292)	.981 (.0147)	.998 (.0126)
Household wealth in \$100,000s	1.033 *** (.00967)	1.035 ** (.0136)	1.015 (.00943)	1.035 *** (.00843)
Whether respondent has pension from employer	1.473 ** (.196)	1.278 (.195)	1.136 (.187)	1.385 ** (.166)
Retired	1.164 (.131)	1.033 (.124)	1.252 (.162)	1.199 (.122)
Separated/ Divorced ^b	1.124 (.182)	.837 (.142)	.604 ** (.106)	.835 (.121)
Widowed ^b	.746 (.120)	.764 (.125)	.644 ** (.109)	.633 ** (.0904)
Never married ^b	.983 (.322)	1.035 (.368)	.946 (.362)	.924 (.265)
Chi-Square	172.7	230.9	144.2	399.9
Observations	2,117	2,117	2,117	2,117

Notes: Exponentiated coefficients; Standard errors in parentheses

*
p < .05**
p < .01***
p < .001;^a
compared to white,^b
compared to married individuals.

Source: HRS 2004/Module 8

Table 3:

Factors Predicting "Don't Know" Answers to Three Financial Literacy Questions

	Answered "Don't Know" to Stocks Question	Answered "Don't Know" to Interest Rate Question	Answered "Don't Know" to Inflation Question
Age in years	1.015 * (.00575)	1.049 *** (.0102)	1.035 *** (.00951)
Female	1.221 (.127)	1.303 (.244)	1.365 (.248)
Black ^a	1.240 (.182)	1.953 ** (.429)	1.444 (.322)
Other race ^a	1.478 (.320)	1.989 * (.658)	2.123 * (.654)
Years of education	.883 *** (.0157)	.873 *** (.0231)	.847 *** (.0210)
Household income in \$10,000s	.997 (.0185)	.955 (.0557)	.962 (.0420)
Household wealth in \$100,000s	.951 *** (.0130)	.983 (.0223)	1.002 (.00457)
Whether respondent has pension from employer	.644 ** (.0977)	.729 (.240)	.562 (.188)
Retired	.859 (.102)	.869 (.171)	.924 (.175)
Separated/ Divorced ^b	.894 (.157)	1.991 ** (.527)	2.104 ** (.539)
Widowed ^b	1.394 * (.227)	1.761 * (.417)	1.909 ** (.437)
Never married ^b	1.355 (.458)	.926 (.586)	1.676 (.871)
Chi-Square	204.3	157.3	160.8
Observations	2,117	2,117	2,117

Notes: Exponentiated coefficients; Standard errors in parentheses

*
p < .05**
p < .01***
p < .001;^a
compared to white^b
compared to married individuals.

Source: HRS 2004/Module 8