

The explanation of increasing heterogeneity and inequality within aging cohorts is a central concern of the life-course perspective and common ground for demographers, economists, historians, sociologists, and psychologists alike. Income and wealth inequality among the aged is one area of shared interest where cross-disciplinary fertilization is occurring. While indices of aged economic inequality applied across different data sets replicate the level of inequality among the elderly, theoretical and methodological concerns are focused more and more on identifying and specifying the long-term interactions between institutional and life-course processes producing this outcome. Institutional mechanisms incorporated in opportunity structures such as labor markets and pensions stratify the availability of resources and rewards, and they interact with life-course processes related to labor force history and job mobility to produce complex patterns of cumulative advantage and cumulative disadvantage. However, the examination of long-term mechanisms of stratification requires finer-grained observations of work, employer, and pension histories than current data-collection strategies afford. Two biases — the steady worker bias and the one pension bias — are inherent in most longitudinal data bases and hamper progress in our understanding of the production of aged inequality.

Key Words: Inequality, Pensions, Steady worker bias

# The Precious and the Precocious: Understanding Cumulative Disadvantage and Cumulative Advantage Over the Life Course

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The life-course perspective is a disciplinary hybrid. It is both constituted by the diverse interests and approaches of multiple disciplines and the medium of their convergence on a common concern: the examination of the historic interplay among people’s lives, structural contexts, and social change (Elder, 1994; Riley, 1987; Riley, Foner, & Waring, 1988). While establishing the birthdate of an idea can be risky business, a broad consensus exists that the nearly simultaneous discovery in the 1960s by researchers from different social science disciplines (e.g., Easterlin, 1961; Ryder, 1965; Schaie, 1965) of the joint significance of age, period, and cohort in explaining the relationship between individual and social change signaled the emergence of this framework. Since that time, disciplinary exchange and convergence have become more and more commonplace, if not theoretically necessary in some subareas.

One source of this convergence is a growing consensus based on a recurrent finding. Research on different life-course processes ranging from health through family to work and economic attainment demonstrates increasing heterogeneity (including inequality) within cohorts (Maddox, 1987; O’Rand, 1995). The treatment of cohorts as relatively homoge-

neous and distinguishable on critical attributes at a particular period in history has been, and continues to be, a fruitful approach to understanding life-course processes (Bengtson, 1993; Easterlin, 1987; Lieberman, 1994; Riley, 1987). However, the differentiation of cohort members over time along significant life-course trajectories (health, family, work, income, and wealth) has become an equally important concern. The explanation of growing heterogeneity and inequality within cohorts is thus a central principle of the life-course perspective and common ground for demographers, economists, historians, sociologists, and psychologists alike.

Patterns of inequality within and among cohorts emerge over time as products of the interplay between institutional arrangements and individual life trajectories. Structural or institutional arrangements operate to stratify cohorts as they allocate differential opportunities for the accumulation of value and reward. What is valued, protected, or rewarded over the life course — which I label as the *precious* in the title above — is regulated by interrelated institutional arrangements stemming from the market and the state that constitute the systemic determinants of inequality. The temporal characteristics of individuals’ behaviors and attainments across these institutional domains have additional influence on the accumulation of that which is precious. The timing,

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durations, and tempos of life transitions and phases vary, with advantages going to those with early and sustained attainments within institutional contexts that assign value and extend protection and reward; thus, the *precocious* benefit from cumulative advantage over time. In short, structural and temporal factors interact to produce inequality over time.

This essay reviews selected aspects of the current state of our knowledge of economic inequality and aging following the precious-precocious scheme introduced above with a special focus on economic inequality in retirement. A central element of our knowledge is derived from the cross-fertilization of economic, sociological, and demographic concepts and methods to deal with the multilevel phenomenon of aged economic inequality. A related element is the compelling force of a shared and growing inventory of rich data bases permitting the direct examination of lives lived through time and social change (Campbell, 1994) and improved dynamic and multilevel methods of analysis that can exploit these data (DiPrete & Forristal, 1994; Mayer & Tuma, 1990). The coalescence of interdisciplinarity, strategic data and new methods is reformulating and recasting former conceptions of retirement and aged inequality. These changes provide another context for interdisciplinary exchange.

#### *Explaining Aged Inequality: A Sociological Turn?*

Indices of inequality within age groups and divergent trajectories of accumulation and loss within aging populations provide strong evidence of increasing heterogeneity and inequality with age (Dannefer, 1987, 1988, 1991; Dannefer & Sell, 1988; Maddox & Clark, 1992). This pattern is nowhere more evident than in studies of income inequality. Income inequality is highest among the oldest age categories, however they are defined. In these age groups, pensions and other assets representing lifetime retirement wealth accumulation clearly distinguish the higher income from the lower income groups, who are much more likely to depend on Social Security and earnings in their later years (U.S. Bureau of the Census, 1993).

An example of the demonstration of aged-based patterns of income inequality across birth cohorts and historical periods is reported in Easterlin, Macunovich, and Crimmins (1993) based on analyses of the 1964 and 1987 Current Population Surveys. The study constructs 5-year cohort income trajectories from the two sample years and examines mean income per adult equivalents in constant 1988 dollars (labeled IAEs) across age groups in 1964 and 1987, respectively. The birth cohorts range from birth years 1915–1919 to 1960–1964. The measure of comparable adult incomes across the observation periods first reveals that, on average, successive cohorts are better off than their predecessors. For example, those born 1945–1949 have higher mean income trajectories between ages 24 and 44 than those born between 1940–1944, 1935–1939, 1930–1934, and so on. Those born after the 1945–1949 cohort show

similar patterns, but the post-WWII cohorts exhibit a slowing rate in the course of intercohort improvement of initial income and opportunities. Thus, successive cohorts have encountered improved opportunities for income attainment at earlier ages, but with recent declines in these improvements.

Easterlin and colleagues (1993) also calculate changes in inequality within 5-year age cohorts between 1964 and 1985. They find increased income inequality with age in both observation years. Their results are portrayed in Figure 1, a graphic representation of gini coefficients reported for age-groups in 1964 and 1987 (based on Easterlin et al., 1993; Table 9, p. 81). Income inequality is highest in both observation years for the aged groups 50 and above. Somewhat higher levels of inequality are apparent in 1987 for age groups between 20 and 54, though the difference between the two periods narrows with age.

In short, after two decades marked by significant trends related to the improvement of the economic status of the elderly population, persistent levels of economic inequality remain. Notable among these trends are (a) federal legislation targeted to protect the income security of the elderly over the period (e.g., the Older Americans Act; Social Security Amendments enacting cost-of-living increases, Supplemental Security Income, and adjustments for widows and divorced women; and pension legislation such as the Employee Retirement Income Security Act to guarantee pension benefits in the private sector), and (b) the general shift toward lower labor force participation rates among older workers driven by industrial changes eliminating jobs held by older cohorts of workers and defined benefit pension rules encouraging early retirement. The persistence of inequality suggests that these changes were experienced unevenly by aging cohorts whose members followed highly diverse life-course trajectories related to income and wealth accumulation.

Crystal and Shea (1990) provide another exemplary analysis of aged inequality that replicates some results in the study above and moves later into the

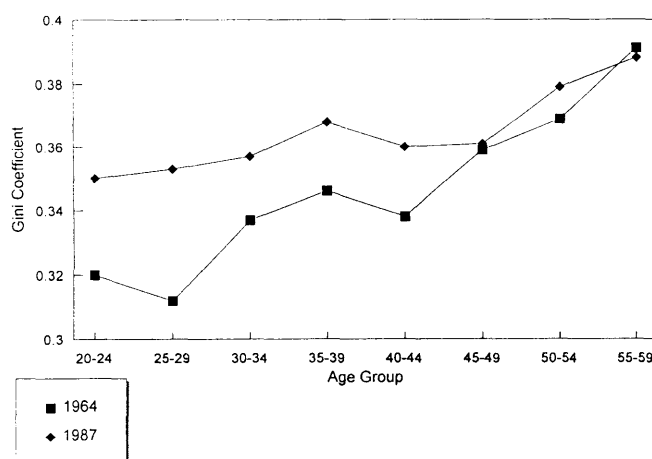


Figure 1. Inequality in IAE by age group; CPS 1964 (■) and 1987 (◆). Source: Easterlin, Macunovich, and Crimmins (1993: Table 9).

life course (see Figure 2, taken directly from Table 1, Figure 1 of Crystal & Shea, 1990). Using the Census Bureau's merged file of the Survey of Income and Program Participation (SIPP), which combines three waves of SIPP's 1984 panel, they employ several measures of income to gauge the relationship between age and income inequality. Their results show that income inequality (also represented as gini coefficients) is greater among the elderly than any other adult age group. After age 44, income dispersion increases steadily, with inequalities after age 64 the highest for all ages.

Among the population over age 65, those who are disproportionately represented in the lowest quintile of the income distribution are: female (71%), widowed (51%), living alone (58%), in poor health (34%), and with an elementary school education or less (53%) (Crystal & Shea, 1990). Poverty rates among nonwhite women over 65 are the highest of all older groups (just above 40%) — more than twice the rate of white females and more than four times the rate of white males (U.S. Bureau of the Census, 1993). Other studies reproduce this evidence of inequalities and their significant covariates using other data bases. Together they find that, in spite of some recent political and ideological declarations to the contrary, the oldest population is not the most homogeneously advantaged but the most heterogeneous with respect to the outcomes of cumulative advantage and disadvantage over the life course (Duncan & Smith, 1989; Palmer, Smeeding, & Torrey, 1988).

Crystal and Shea (1990) refer to "cumulative advantage" and "cumulative disadvantage" as the preferred explanatory framework for their results. This is a life-course explanation highlighting the influences of earlier lives that anchor diverse trajectories in old age. Why should inequality within a cohort increase with age rather than remain constant or nearly constant? What mechanisms facilitate the increase in inequality over time? What mechanisms link earlier advantages and disadvantages with later ones in ways that transcend individual volition and behavior? Why have federal interventions had little general effect on the level of inequality among the elderly?

Their preferred explanation reflects a "sociological turn" in the explanation of aged inequality that attempts to go beyond traditional economic explanations based on the proximate determinants of wealth and retirement (Hurd, 1990). These explanations have explained retirement and economic status at retirement as functions of current needs (usually health limitations), current resources (usually net worth, pension eligibility, and final earnings), and institutionalized retirement schedules (usually age-based Social Security eligibility). However, the life-course framework emphasizes the longer time processes of economic attainment as important elements of the explanation; the framework incorporates the long-term employment experience and the sequence of earlier opportunity structures to save for retirement from employment as important for understanding the process of inequality and the sources of heterogeneity contributing to it — including the histories of

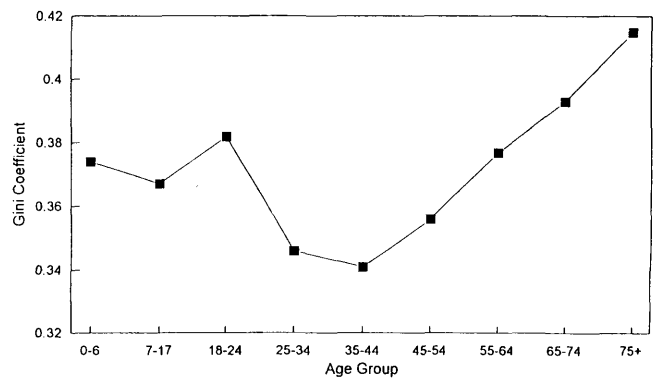


Figure 2. Gini coefficients of income inequality by age group (SIPP). Source: Crystal and Shea (1990: Table 1, Figure 1).

nonwork or marginal employment which preclude pension-wealth accumulation.

The idea of *cumulative disadvantage* (hereafter the abbreviated representation of two terms) was introduced by Robert K. Merton three decades ago to explain the wide range of inequality in science, in which a minority of scientists appear to have a monopoly of productivity and recognition. He argued that inequality among scientists increases over time. Productivity and recognition are intertwined so that productivity brings recognition which, in turn, brings resources for further productivity, resulting in a distributive process that is biased increasingly to the advantage of a narrowing few and the disadvantage of many. Dale Dannefer has argued for nearly a decade that this model of inequality has considerable utility for explaining aged heterogeneity, since it offers a middle-range approach to the life course that necessitates the linkage of individual level outcomes to systemic processes operating over time (Dannefer, 1987, 1988, 1991; Dannefer & Sell, 1988). Thus, the inequality of aged populations is not an instantaneous phenomenon, nor is it the simple averaged culmination of life decisions made by individuals living in identical social circumstances over time; rather, inequality is a product (interaction) of institutional arrangements and aggregated individual actions over time.

The elderly population is dispersed across an income range represented at one end by the so-called "pension [or asset] elite" and at the other by the persistently poor or near-poor (Duncan & Smith, 1989). These two groups comprise the margins of income inequality that probably account for the dispersion observed over time. In the middle is the majority (the average) elderly population whose fortunes range near the average over time and who may be better represented by such concepts as "status" or "income maintenance" (cf., Crystal, Shea, & Krishnaswami, 1992; Henretta & Campbell, 1976). The hypothesis of cumulative dis/advantage has special promise for demarcating the mechanisms operating at the margins to produce bifurcation, as well as in the middle to account for the average experience in a cohort.

*The Institutional Bases of Cumulative Dis/Advantage.* — Identifying the mechanisms linking institutional arrangements to population outcomes presents a greater challenge to life-course research than gauging the outcomes themselves. How do institutions allocate value, protection, and reward over time in ways that reinforce or ameliorate inequalities? How can variations in institutional arrangements be captured and linked to individual-level characteristics to understand these processes?

Age stratification in class societies is organized primarily around the market or employment system and the benefits and advantages associated with it and, secondarily, around compensatory government interventions to protect those excluded by the employment system. The centrality of the employment system in class societies has led Kohli (1988) to emphasize that patterns of work vs nonwork over the life course are the principal partitions of social inequality channeling subgroups of the population down paths of inequality. Those systematically excluded from or marginalized within the employment system become more dependent on the compensatory mechanisms of the state that operate at the margins and preserve inequalities (O'Rand, 1988).

Minority populations are especially vulnerable to persistent poverty in middle and later age categories, even after controlling for government intervention targeted to alleviate it (Farley, 1988). Recent longitudinal studies of the older U.S. population using the Panel Study of Income Dynamics (PSID) between 1983 and 1988 provide strong evidence of this process. Burkhauser, Duncan, and Hauser (1994) examine the age-related prevalence of persistent poverty among women and men before and after government interventions. The "persistent poor" are defined as those whose income remains below one-half of the median for three years or more between 1984 and 1989. Their results are graphically represented in Figure 3 (based on figures in Burkhauser et al.'s Table

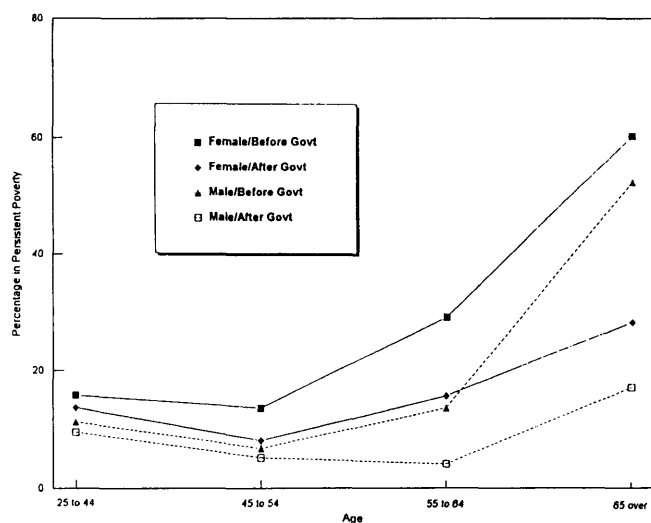


Figure 3. Before and after government persistent poverty permanent income, by age and gender; PSID 1983–1988. Source: Burkhauser, Duncan, and Hauser (1994: Table 5).

5, p. 155). They report that women have significantly higher rates of persistent poverty than men before government intervention (i.e., before government transfers are included to adjust incomes). Moreover, government transfers do not fully compensate for the persistence of poverty, especially in the immediate preretirement years (ages 55–64). The ratios of women to men who are persistently poor in the 55 to 64 age groups are 2.13 and 3.79 before and after government intervention, respectively. After age 65 and when government transfers are taken into account, women's persistence in poverty is 30% higher than men's (Burkhauser et al., 1994).

Women's lifetime dual participation in the family (caregiving) and employment systems — and especially their exclusion from those occupational and industrial sectors with the greatest retirement protections provided by pensions and related benefits — constrains them overwhelmingly to the lower income margin of the aged population. Government interventions at later ages cannot fully compensate for these longer term patterns. Accordingly, aged inequality is significantly affected by women's cumulative disadvantage (O'Rand, 1994). The limited opportunities of ethnic minority status exacerbate this process characterized by Farley (1988) as an "uphill race" for blacks and women in the United States.

There is considerable evidence that gender-, ethnic-, and class-based inequalities operate similarly in other countries, although social welfare structures operate differentially across societies to ameliorate and/or to compensate for inequalities stemming from economic and demographic sources (cf., O'Rand, 1988; Pampel, 1993). Burkhauser et al. (1994) compare their PSID panel discussed above with a comparable German panel over the same period in the 1980s. They show that while state welfare policies in Germany provide more generous protections of the economic security of subgroups like women who are excluded from market mechanisms for retirement income saving, women are nevertheless still more vulnerable to poverty in both the U.S. and German social security systems. In both systems, women's lower levels of participation in or segregation from the employment or private pension sector leave them dependent on public pension entitlement systems which systematically underestimate their income needs, especially as derived beneficiaries (particularly as widows) over the period following death of (or separation from) a spouse. As such, the process of increasing inequality within cohorts is anchored in earlier opportunity structures and the individual behaviors constrained by them.

*A Simulation of Cumulative Dis/Advantage in the Working Population.* — The growing adoption of life-course approaches is apparent in efforts to reconstruct or simulate career trajectories and the structural factors that anchor, direct, or perhaps even deflect them. The approaches are being applied to examine inequality across the life course as a product of structured opportunities and the timing patterns of individuals' achievements in light of these opportuni-

ties (see Kerckhoff, 1994, for a general review). Data permitting, studies of retirement are attempting to push backwards in time to track the variable patterns of labor participation, exit, and reentry in older populations that better capture the process of inequality and the variability in life trajectories that underly it (e.g., Doeringer, 1990; Henretta, 1992; Kohli, Rein, Guillemard, & van Gunsteren, 1991). And again, data permitting, new analytic methods using multiple equations systems are being developed to capture the simultaneous interplay of intertwined life-course trajectories linking transitions in education, work, fertility, and marriage across the life course that produce heterogeneity and inequality (e.g., Upchurch, Lillard, & Panis, 1995). Finally, a more active incorporation of measures of structure and historical context is being undertaken to directly examine models of structural or historical effects. Time and institutional opportunities and constraints are central to life-course approaches, and efforts to model their effects are evident in current research strategies to link individuals with organizational and political-economic environments that regulate individual opportunities (Henretta, 1992; Kerckhoff, 1994).

A simulation recently published in *The Gerontologist* is indicative of this development in aging research. Mehdizadeh and Luzadis (1994) examine how labor market mobility and patterns of pension coverage that vary across jobs influence the accumulation of retirement and pension wealth. They demonstrate that in a mobile workforce, the interactions among the type and timing of pension coverage critically determine patterns of pension and wealth inequality. Their study is historically and theoretically valuable for illustrating the thesis of my presentation. First, it is sensitive to the changing employment relationship that does not coincide with earlier assumptions about the predominance of workers' "lifetime employment" or career patterns with only one employer (Belous, 1989; Doeringer, 1991; Pfeffer & Baron, 1988) and to the growing heterogeneity of pension instruments and retirement saving strategies made available to workers (Doeringer, 1990; O'Rand, 1994, 1995). Theoretically, their analysis emphasizes the long-term effects of the temporal variability of work careers and the impact of sequential employment contexts for inequality in later life.

Mehdizadeh and Luzadis (1994) construct alternative career scenarios of workers with sustained employment careers (37–40-year careers). They assume the following: (1) earnings remain unaffected by job changes with first-year earnings at \$25,000 (in constant 1988 dollars); (2) individuals survive until retirement; (3) workers are assumed to be 100% vested after 5 years; (4) vested benefits will not be (CPI) indexed; and (5) multi-employer plans are excluded. They create six distinct scenarios based on job mobility and pension plan types (Mehdizadeh & Luzadis, 1994, p. 176):

1. No job change until retirement — covered by defined benefit plan;
2. No job change until retirement — covered by defined contribution plan;

3. Job change — covered with defined benefit plan in both until retirement;
4. Job change — covered with defined contribution plan in both until retirement;
5. Job changes, 4 different jobs — beginning with defined benefit but ending with defined contribution plan;
6. Job changes, 4 different jobs — beginning with defined contribution but ending with defined benefit coverage.

Their simulation results are summarized in Figure 4, a graphic representation of their tabular data. They reveal the economic consequences of the joint operation of diverse job mobility patterns and structured opportunities for retirement savings. The accumulation of retirement (RW) and pension wealth (PW) at ages 62 and 65 ranges from the highest level (lifetime employment [no mobility] under defined benefit pension plan participation — scenario 1) to the lowest level (high job mobility with mixed coverage ending in defined contribution pension participation on last jobs — scenario 5). Scenarios 1, 3, and 6 are characterized by the predominant influence of defined benefit plan coverage — either continuously with and without job changes or at the culmination of a job career with job changes. The other scenarios, based on higher job mobility and the predominance of defined contribution plans, show reduced retirement saving.

All in all, within the relatively advantaged population with long-term work careers and readily available pension coverage, differences in structural opportunities (i.e., types of pensions) and in the temporal organization of these careers (i.e., extent of job mobility and the early, continuous, and or late participation in defined benefit plans) produce inequality in pension and retirement wealth outcomes. Early and sustained participation in one job covered throughout by defined benefit pensions leads to cumulative advantage. Or, using the precious-precocious schema introduced at the beginning of this presentation, work careers characterized as *precocious* — i.e., careers reflecting early and long-term participation in highly valued saving schemes — simulate cumulative advantage.

The significance of these results is far-ranging for life-course theory and when considering the changing economic landscape in which we now live. The

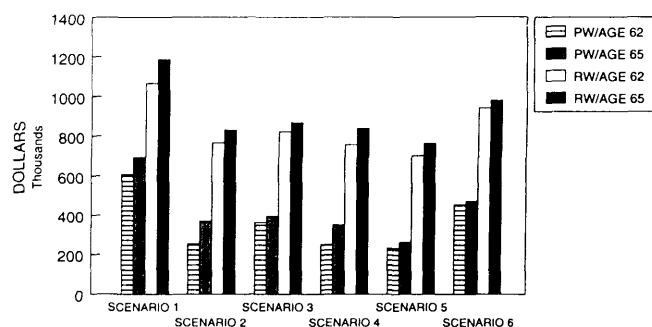


Figure 4. Job mobility, pension coverage, and retirement wealth. Source: Mehdizadeh and Luzadis (1994: Table 1).

lifetime employment model of the employment relationship is moving toward extinction as employers increasingly prefer the efficiencies of short-term employment contracts and contingent work (Belous, 1989; Pfeffer & Baron, 1988) as one response to a volatile global economy (Doeringer, 1991). Job mobility is increasing across all age- and gender-groups in the labor force in response to the demands of the workplace. At the same time, pension systems are changing in the direction of retirement savings schemes that are more highly individualized and less protected from market failures. The new schemes are epitomized by the defined contribution (DC) pension type. The defined benefit (DB) pension plans — associated with the so-called “trend toward early retirement” observed over the past quarter century in this country — were more collectivized. The latter pension system was built in association with job tenure norms protecting lifetime employment (with the same employer or under the same pension plan) within the system generally, and employment within a particular pension system prior to retirement specifically. The defined contribution (DC) type “protects” retirement saving from the short-term risks of job mobility, but “penalizes” retirement saving across job mobility regimes over time. Other features of the DC plans, especially their cash-out or liquidation entitlements to manage short-term or intermediate economic needs, threaten their survival value as retirement reserves; this feature is omitted from the Mehdizadeh-Luzadis scenarios.

In short, defined benefit and defined contribution plans represent employment structures for retirement saving. They are regulated by different temporal rule structures that differentially facilitate or inhibit retirement saving over the work career. And they encourage (in the defined contribution case) or discourage (in the defined benefit case) job mobility. Early and single job employment careers reward pension saving; delayed and highly mobile job careers are penalized. Thus, pension types introduce inequalities above and beyond the temporal trajectories of careers and they provide a strategic illustration of the precious-precocious schema. Historical trends suggest that the changing prevalence of pension plan types will probably increase the heterogeneity of work careers and inequality in pension and retirement wealth saving. The growing predominance of defined contribution plans and their relative prevalence in the major employment growth sectors (communications, trade, finance, and services) are well documented. As such, pension plans as vectors for retirement saving have different value-generating properties — i.e., they are differentially *precious*. Moreover, the timing of employment in conjunction with these plans favors those with early and sustained job attachments — i.e., workers with *precocious* careers.

#### *New Data for Changing Theories of Aged Inequality*

This partial and brief review of our state of knowledge reveals the efforts of economists, demogra-

phers, and sociologists to understand the persistent findings of aged inequality and to orient their explanations in light of a life-course emphasis on dynamic and multilevel approaches. Several strategies are being followed that lend themselves to this common framework. Among these strategies are: the use of strategic data sets that span several decades, for example, the Panel Study of Income Dynamics (PSID), the National Longitudinal Studies, the Terman sample, among others; the linkage of multiple data sets that permit multilevel analyses and structural variations, such as the merger of data from the Current Population Surveys with selected panel data sources, or the comparison of different national data sets like the PSID and the German Socio-Economic Panel; and the matching of individual-level data with institutional data such as employer or health organization records, such as the Employer Pension Plan data supplement to the 1989 National Longitudinal Survey of Mature Women. Replicated cross-sectional surveys, pooled independent surveys, and pooled longitudinal surveys are taking us beyond the snapshot approach to the life course (see Campbell, 1994, for a cogent review of this issue and its implications for future research).

However, many of these data sources still omit critical life-course information as a result of earlier theoretical biases and data-gathering conventions. In the context of this essay, two biases and their related data-collection problems are worthy of discussion: the *steady worker bias* and the *one pension bias*.

*The Steady Worker Bias in Retirement Research.* — Retirement research is tethered by a steady worker bias (credit for this terminology should go to Karen Holden, an economist at the University of Wisconsin who has worked extensively on studying retirement and aged inequality). This bias is derived from a lifetime employment model of the work career that conceptualizes the career as a relatively sustained sequence of full-time jobs of longer as opposed to shorter durations over the adult life span. Of course, this model has never been applicable to the entire workforce, especially to women’s more interrupted, mobile, and truncated work career patterns.

Yet, this bias permeates the way we think about retirement and the way we go about gathering data on the retirement transition. This bias usually assumes that characteristics of current or last job (i.e., tenure, earnings, pension coverage) are valid and reliable indicators of the entire work career that provide adequate information regarding the factors that drive the ultimate retirement decision. Accordingly, early (never mind continuous) work or employment histories are not collected. The bias sometimes assumes that only jobs with designated durations, such as jobs lasting 5 or more years, are the ones that matter for the study of retirement. As such, subgroups of workers (again usually women) are omitted from view. And, sometimes the bias assumes that we do not need to know very much at all about the work career, i.e., its temporal organiza-

tion as sequences of occupations, employers, and/or industrial locations of varying durations. The reliance on current or last job presumes a steady-worker model; put another way, the bias presumes that the relevant population for the study of retirement and inequality is divided between nonworkers and steady workers.

The heterogeneity of work careers challenges this bias. Some careers do not conform with the assumptions regarding (a) the representativeness of the last job, (b) the greater importance of jobs of longer rather than shorter durations, and (c) the adequacy of characteristics of the last job (tenure, earnings, pension coverage) without reference to the career process (including job mobility) over time as informative for the retirement decision as it is. Complicated work patterns have long characterized a significant minority of workers. And, current trends reveal a spread of these patterns across the wider labor force in industrial democracies. Workers move in and out of the workplace and between jobs. Older workers are increasingly moving from "career" jobs to post-career employment to "bridge" the retirement transition. Finally, more and more retirees are returning to work (e.g., Doeringer, 1990; O'Rand, Kreckler, & Henretta, 1994).

All of this is to argue that we need fuller information on the work career — and on its discontinuities as well as its continuities. Movements into and out of the workforce mean that cross-sectional surveys — or even patterns observed in short (2–3 year) longitudinal studies — may miss individuals in those jobs whose wages and/or benefits were major forces in retirement decision making. As serious as the omission of continuous work history is the omission of workplace characteristics. The latter can provide critical structural data on the contexts of workers' lives and the factors influencing the courses of those lives.

*The One Pension Assumption.* — Pension data are difficult to collect. Individuals usually have limited knowledge or understanding of their pensions, including their (current or future) values and the rules attached to their administration. However, when these data are collected, they are gathered in a manner based on assumptions as restrictive as those associated with the steady worker bias discussed earlier. Nearly every survey source with pension data limits its information-gathering to only some of the following: eligibility for pension income at retirement; expected level of pension income at retirement; pension coverage on current or last job; pension coverage only on jobs of 5 years duration or more; types of pension on current or last job. Rarely are all of these questions asked. But, more importantly, never is a pension history gathered.

While practical considerations may preclude this strategy inevitably, theoretical assumptions are more responsible for current strategies. Retirement saving from pensions is typically treated as a single, continuous vector of accumulation undifferentiated by job mobility or pension mix. The steady worker bias is a reinforcing assumption. The Mehdizadeh-Luzadis

(1994) analysis is a pointed criticism of both biases. Moreover, even when multiple measures of pensions are taken, they are treated as endogenous — i.e., as outcomes whose histories and contexts of accumulation are irrelevant in the retirement decision and for final economic inequality in the aged population.

I conducted an interview recently with a human resources specialist working in the pharmaceutical industry who in his earlier career had specialized in employee benefits management in a large corporation. His "new career" is in the development of outplacement programs for mid-level managers. I asked him what trends in retirement income he anticipates in the next century from his vantage point. His response was that we can expect future workers to end their work careers gradually and unevenly over an extended period and, when they finally retire, to find several "smaller" retirement benefit checks rather than just one pension check in addition to Social Security in the mailbox.

His vision, of course, is informed by the changing structure of the work career and by the changing pension mix. His own career is a self-exemplifying case. Benefit packages have been refashioned to offer heterogeneity (cafeteria-like choices) and to shift more of the burden to employees. This trend facilitates the individualization of the employment contract. More precious (expensive and valuable) benefits such as pensions and health-care benefits extending into retirement require higher levels of employer and employee contributions or exemptions. Less precious benefits such as flex-time or home-based work, and even family leave plans, often mean employers' costs and risks are lower and workers are trading long-term income security for "time" or "flexibility" in the management of their current lives. The pension mix is a mixed blessing for retirement saving and a current and future source of aged inequality.

Pension and benefit histories probably have value as exogenous factors in work careers and in retirement wealth trajectories. Some research reviewed here strongly supports this proposal and calls for new data and new ways of thinking about the interplay of lives, structures, and contexts over time in the production of inequality.

### Conclusions

Aged inequality provokes questions regarding its roots in the experiences of aging cohorts. Life-course approaches have pointed the way to the answer by emphasizing the dynamic interplay of individual life trajectories and structural and contextual factors that have affected inequality in the past (Elder, 1994; Riley, 1987; Riley et al., 1988). Projections of the aging populations of the future — their expected longevity, potential for productivity well beyond traditional retirement ages, and patterns of retirement wealth accumulation — warn us that our research must be sensitive to social change and to heterogeneity (see especially, Riley, 1994; Riley,

Kahn, & Foner, 1994; Rappaport & Scheiber, 1993). Theoretical biases that limit the examination of heterogeneity and change will limit our understanding of the phenomenon and the utility of our research for policy and planning.

Our successful acknowledgment and correction of these biases will stem from the common concern of several social science disciplines to answer these questions and from the unique interests and contributions that these disciplines provide. Data sources permitting the application of demographic and econometric methods to examine the dynamic courses of lives through time are being more widely used across disciplines. Similarly, sociological concerns regarding measuring structural and systemic phenomena in the life-course process (e.g., Riley, 1994) and sociological models such as the one inspired by the cumulative dis/advantage hypothesis (advocated by Dannefer, 1987) are being incorporated into life-course research by demographers and economists. The cumulative dis/advantage hypothesis, in particular, provides a middle-range theory with multilevel features: the temporal linkage of human lives and changing social structures can be pursued by examinations like the one by Mehdizadeh and Luzadis (1994) highlighted in this essay. Thus, the precious and the precocious can be modeled jointly.

Finally, our data collection practices must become more consonant with life-course assumptions. Strategic data sets that combine more continuous life histories with information matched directly to structural contexts such as organizations, labor markets, and other political, economic, and historical contexts such as welfare state structures deserve some priority in collective efforts to build data archives. The steady worker bias and the one-pension bias should not guide the data collection strategy.

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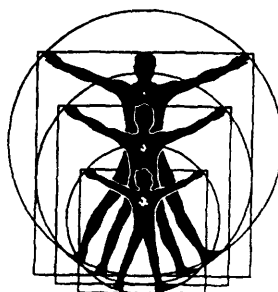
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