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NEW RISKS FOR WORKERS: Pensions, Labor Markets, and Gender

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■ **Abstract** This paper considers the changing social institution of employer-sponsored pensions within the framework of the sociology of risk. Employer-sponsored pensions are elements of a variable and changing occupational welfare system in which the risk and responsibilities for retirement income security have shifted from employer to worker through the expanding role of third-party vendors (insurers). Risk processes can be identified at the employer, insurer, family, and individual levels. This system can be conceptualized as a hierarchy of risk that begins at the organizational level with employer sponsorship of alternative pension plans and extends to the allocation of workers across pension jobs, to worker decisions regarding pension participation and investment of funds, and to final pension balances. Embedded in this multi-level risk system are gender differences that further stratify the aging workforce. We discuss the implications of these changes for future research on life course and retirement and recommend that risk preferences be examined within the contexts of the workplace and the household.

INTRODUCTION

The American occupational welfare system is distinguished historically from other advanced industrial societies by residualist liberal institutions oriented toward private spending and limited redistribution (Esping-Andersen 1999). As such, U.S. workers, and especially minority workers, have traditionally confronted relatively higher labor market and life course risks for job loss, poverty, and health costs than workers in other developed economies. Institutional changes in employment such as pensions and health insurance have recently moved this system even further toward privatization and away from social insurance. These shifts are placing more responsibility on individuals for managing both ordinary and extraordinary risks in conducting their lives, protecting their families, and planning their futures.

This paper examines the current U.S. occupational pension system within a framework of the sociology of risk. Risk is defined as a calculable level of vulnerability or opportunity for a future outcome. It varies by social location and depends on how much the activity in question is predictable and routinized (Heimer 2002). Building on earlier arguments along this line (Heimer 1985, 1988, 2002; Jacoby 2001), we propose that a hierarchy of risk organizes the U.S. pension system. Actors at different levels of the system—employers, insurers, and workers—confront different and changing circumstances that condition and alter their willingness and capacity to bear risk. Employers facing different competitive markets bear different risks vis-à-vis the provision of worker welfare. Insurers similarly assess the differential hazards of insuring diverse risk pools of workers. Finally, workers located in different labor markets and with unequal household resources vary in their willingness and capacity to accept risk on their own behalf, especially in the face of market uncertainties. The consequences of this hierarchy include a decline in confidence in private and social welfare institutions by employers and workers alike.

Risk Bearing, Risk Spreading, and Risk Aversion in Occupational Welfare Systems

The concept of risk is central to the examination of modern labor market institutions. Demographic shifts and globalization processes are reconfiguring the temporal, spatial, and social organization of work and are redefining employment relationships, including patterns of risk bearing and risk spreading. The major demographic shifts include the aging of the labor force, higher growth of the retired population relative to the working population in advanced countries with declining fertility rates (Rappaport & Scheiber 1993, Wise 1997), and the expansion of manufacturing labor among younger populations in the developing countries with higher fertility rates and strong motivations to enter the global economy (Berg & Kalleberg 2001). Older workers and longer-lived retirees present higher compensation costs to employers, who are moving away from the long-term risks of employer-provided insurance (and particularly pension and retiree health insurance). Younger workers drawn from an international labor pool present lower compensation costs, little risk of long-term obligations, and flexible 24-hour production schedules. The growth of nonstandard and offshore labor pools and the global spread of the ideology of individual pension accounts reflect these changes.

In addition, the shift from managed competition to price competition has moved employer alliances away from workers and toward shareholders (Levy 2000). Managed competition refers to the oligopolistic structure of U.S. industry (especially major manufacturing) and the attendant employer-worker accords that prevailed in the post–World War II period until the mid-1970s. This system consisted of agreements among large collectivities (labor unions and multiple firms) over long-term contracts that offered incentives to workers to remain attached to employers with promises of future income maintenance through pension arrangements and other insurance instruments (O'Rand 1986). Since then, price competition has

eroded long-term relationships between employers and aging workers. Internal labor markets once protected by these contracts are being replaced by externalized labor pools and labor agreements that prefer nonstandard work arrangements (Berg & Kalleberg 2001) and place older workers at increasing risk of income and health insurance loss (O'Rand 2000).

Insurance institutions have been examined almost exclusively from a rational choice perspective, grounded in Arrow's (1971) definition of the problem of moral hazard. His argument is that risk bearers (in this case, employers and insurers) cannot completely define their risks. Unavoidable (fixed) risks such as accidents motivate risk bearing to decrease losses. However, the incentives and behaviors of the insured (i.e., workers and retirees) are less calculable and may increase losses for the insurer. The latter problem leads insurers to develop strategies to control the behaviors of the insured. Without the capacity to control the motives and behaviors of the insured, risk bearing becomes too costly. In the current context of pension and other social insurance systems, employers and insurers are confronted by demographic and structural risks such as aging labor markets, extended life expectancies of retirees, state reforms, volatile equity markets upon which pension funds are based, and escalating health care costs.

In the early 2000s, the burst of the stock market bubble and news of Wall Street scandals were accompanied by revelations of hidden fees and charges levied on workers' mutual fund accounts. Such fees extend the problem of moral hazard to the individual worker, who in the current context cannot define her/his risks. In this case, the insured cannot control the behaviors of the insurer.

Jacoby (2001) has traced the evolution of risk bearing and risk spreading in the labor market. Nineteenth century forms of risk sharing or risk spreading were based on "mutualism," sustained by familial and fraternal organizations. These were largely voluntary, informal sources of social capital with which workers supported each other during the early industrial revolution when family capitalism dominated. Trade and craft unions followed in this tradition. During this era, private commercial life insurance was also born, although in the face of considerable resistance (Zelizer 1979).

The turn of the twentieth century initiated the long development of institutions of welfare (managerial) capitalism, such as unions and corporate human resources (personnel) bureaucracies, which sought to sustain labor stability and worker loyalty among valued labor pools with occupational welfare devices such as pensions. In this era, "welfare work" or human resources departments (Jacoby 1985) and labor-management accords developed as forms of risk spreading between employers and workers. Employers achieved greater control of their workforces, and workers achieved greater job security and more insurance against life course risks. Indeed, until the 1970s, the expansion of insurance to include larger populations (e.g., families of workers) and to cover more risks (e.g., health, disability, unemployment) prevailed in the private and public sectors.

The turn of the twenty-first century, according to Jacoby (2001, p. 30), appears to have introduced a "brave new world," in which risk spreading among workers and

between employers and workers is disappearing and being replaced by increasingly individualized risk bearing by workers. Employers face old liabilities for current aging workers and retirees with underfunded pensions (Munnell & Soto 2003, Stewart 2003) and escalating health insurance costs (Institute of Medicine 2002). Consequently, they have been replacing risk spreading instruments like traditional pensions with individual savings accounts and are rapidly eliminating retiree health insurance for future workers and retirees (Institute of Medicine 2002).

Accompanying these structural changes is the emergence of a culture of "embracing risk" (Baker & Simon 2002a), an ideology that shifts the perception of risk from one of individual vulnerability to loss to one of opportunity for accumulation. Stock market investment and tax shelters provide putative opportunities for individual investment and saving. Recent policy initiatives to privatize some aspects of Social Security follow this logic. However, the match between the ideology of embracing risk and individuals' investment and saving behavior is unclear (Hardy 2000).

Few sociologists have used the framework of risk to analyze labor market behaviors such as pension participation. However, the context of occupational welfare is highly suited for the examination of these processes, to which we now turn. Diverse forms of risk are institutionalized in the occupational welfare system: risk bearing, risk spreading, and diverse perceptions of risk are observable. Additionally, risk aversion and risk embracing appear to be patterned responses to labor market locations and historical contexts.

Averting and Embracing Risk

Carol Heimer (1988) introduced a foundation for a sociology of risk in the *Annual Review of Sociology* that summarized and extended two traditions: (*a*) the experimental studies of perceptions of risk traceable to a body of work associated primarily with the behavioral economics and cognitive psychology of Tversky and Kahneman (e.g., Tversky & Kahneman 1974, 1981), and (*b*) the provocative anthropological insights of Mary Douglas on the structural bases of risk perceptions (e.g., Douglas & Wildavsky 1982). The former empirical tradition challenged simple rational choice models of risk perception. The competing argument is that individuals employ frames of reference (heuristics and biases) in the estimation of risk. A major frame of reference uncovered by this research is that individuals are risk averse when faced with gains and risk seeking when faced with loss. That is, individuals "take risks to avoid costs rather than to make gains" (Heimer 1988, p. 503).

However, the origins of these perceptual frames were not addressed by the experimentalists. Instead, Douglas and her colleagues followed with the argument that estimations of risk were influenced by "social location" and "the hold that institutions have on our processes of classifying and recognizing" (Douglas 1986, p. 3). Hence, risks are noncomparable; what is dangerous from one vantage point may not be perceived as such from another. Thus, social structure mediates perceptions of risk.

Heimer (1988) extends this structural insight to a multilevel argument that organizational and individual interests and frames of reference differ in ways that may sometimes lead to noncomparable (and often conflicting or contradictory) estimations of risk. Workers, employers, and insurers may not view the same risks as equally good or bad, dangerous or beneficial. Moreover, Heimer provides the additional insight that actors probably follow different rules when they perceive they are engaged in strategic interactions with others than when they are making choices among options with putatively fixed probabilities unrelated to others' interests. Employers and insurers may not view all workers as sources of equivalent risks; thus some workers receive more benefits, and others fewer (Heimer 2002). Alternatively, workers may package employer-provided insurance with other institutional support structures (i.e., the family, Social Security disability, Medicaid, and pension programs), following new forms of mutualism among the less insured.

THE EMPLOYER-SPONSORED PENSION SYSTEM

The state has historically organized pensions within the realm of the tax system, and therefore it lends its implicit support to the coupling of retirement income with wage labor. In the period following World War II, changes in the federal tax code made it attractive for employers to offer fringe benefits such as pension plans rather than wage increases, encouraging growth in the employer pension system. Labor union victories also helped bring about the rapid expansion of employer-sponsored pension coverage during this period. In the decades to follow, Social Security and employer-based pensions have shared the responsibility of providing income security to the aged. Tax-qualified plans encourage saving by offering employee participants a tax effective way to save for retirement. Plan contributions and earned assets from the plan are not treated as income and therefore are not taxed until the benefits are paid out to the recipient, providing a disincentive for workers to remove funds before retirement (Goodfellow & Schieber 1993). Federal tax regulations also encourage employers to provide pension opportunities for their workers by offering tax incentives to do so, mainly by sheltering employer pension contributions from tax liability.

Today, employer-sponsored pensions represent both collective and individualized approaches to retirement savings that are facilitated by the employment connection. Traditionally, the most common types of employer-based pensions were defined benefit (DB) plans, in which set benefit levels distributed as lifetime annuities are formulaic combinations of employee age, wage levels, and years of service. Eligibility for benefits from DB plans is regulated by federally mandated vesting rules [Employee Retirement and Income Security Act (ERISA) of 1974, and the Tax Reform Act of 1986]. Historically designed as a labor management tool, pensions were a collective enterprise funded by employer contributions, with benefits available to workers at ages of eligibility and in amounts weighted by years of service that coincided with management of the firm's labor force. Because DB plans reward seniority and loyalty in large firms (which translated into

long, uninterrupted careers) entitlement to these benefits for women was more often achieved through survivors' status than as primary beneficiaries.

In contrast to the wage-indexed annuities promised by DB plans, defined contribution (DC) plans resemble tax-exempt savings accounts. Employers and/or employees make contributions to an individualized pension fund, which accumulates resources over time. These funds are invested by workers, and the benefits paid in retirement depend on the level and consistency of contributions and the soundness of the investments. Vesting is often immediate (or within one year), and upon leaving the firm the worker often has the option of shifting the accumulated assets to another pension account or taking a cash settlement (or lump-sum distribution). The 401(k) is perhaps the most widely offered DC plan.

A shift in coverage to DC plans has occurred in both absolute and relative terms (Olsen & VanDerhei 1997). Figures 1 and 2 are based on data from the Internal Revenue Service's *5500 Series Employer Records* (U.S. Department of Labor 2001–2002) and show changes in the distribution of DB and DC plans since the late 1970s. Figure 1 displays the distribution of all pension plans between 1979 and 1998. The growth of DC plans relative to DB plans, particularly during the 1990s, is evident. The number of offered plans overestimates the number of workers who participate in such plans because employers commonly offer DC plans as supplements to existing DB plans, and not all workers participate in offered plans. However, examining the number of active pension participants in a pension by plan type over the same two decades shows a similar trend. Figure 2 shows a decline in the proportion of pension workers in DB plans, coupled with a simultaneous rise over time in the number of workers actively participating in

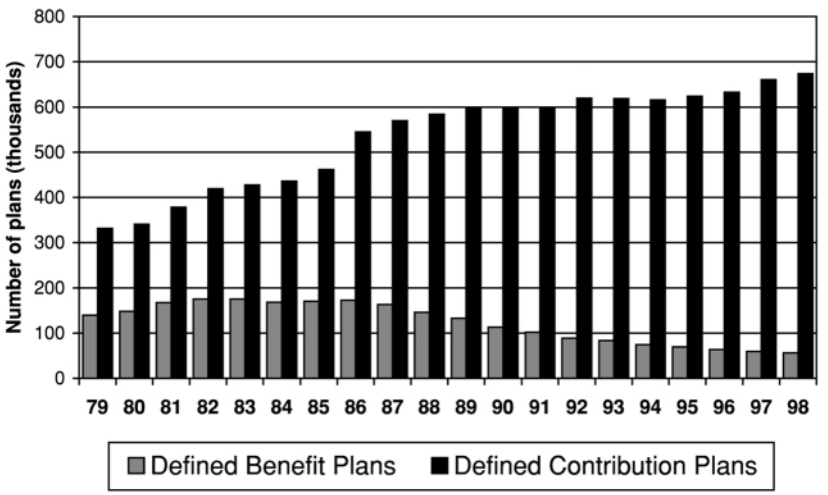

Figure 1 Distribution of DB and DC plans, 1979–1998. Source: U.S. Department of Labor 2001–2002, table E1.

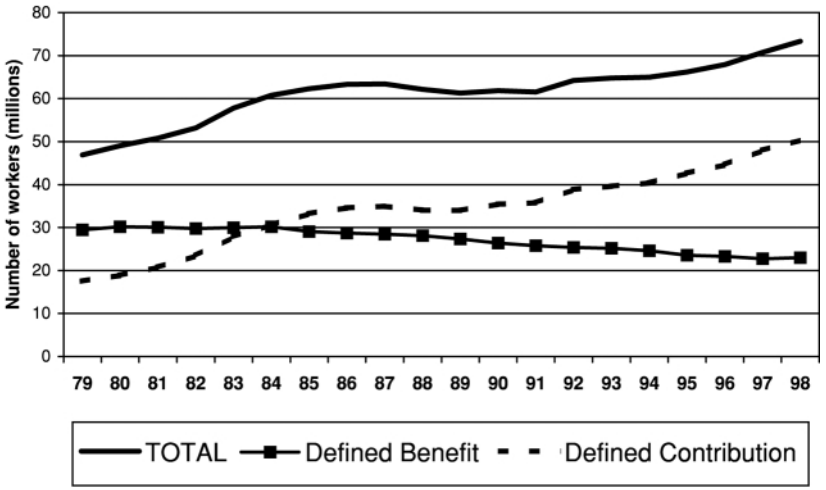

Figure 2 Active participants in pension plans by plan type, 1979–1998. The number of participants includes double counting of workers in more than one plan. Source: U.S. Department of Labor 2001–2002, table E8.

DC plans. These changes have occurred for both men and women (see Figure 3, based on data from the 1989 and 1998 Surveys of Consumer Finances), although research suggests variation in the growth of DC coverage by cohort, with women's participation in DC plans increasing at a faster rate than men's among middle-aged workers (Bajtelsmit & Jianakoplos 2000). Projections suggest the continued growth and dominance of DC plans coupled with the continued decline of DB plans, particularly as workers covered by DB plans retire in the next few decades (Gordon et al. 1997).

Stratification of Pension Access

Access to employer pensions as a means of accumulating retirement income remains stratified within the labor market. Pension access is embedded in a large network of social relations, both reflecting and reproducing social hierarchies (Heimer 2002). The structure of the system of labor market rewards that serves to stratify the labor force has two prongs. In addition to wage and salary structures, access to employee benefits, particularly employer-based pensions, is a second mechanism through which the labor force is stratified. Unlike the more visible stratification that wages represent, employer-sponsored pensions represent deferred earnings and future claims to income (O'Rand 1986).

Previous literature on the availability of employer-sponsored pensions elaborates the relationship between the structure of the labor market and pension opportunities (Even & Macpherson 1993, 1994a; Korczyk 1992; O'Neill & Polachek 1993; Yakoboski & Silverman 1993). Access to a pension rises with earnings

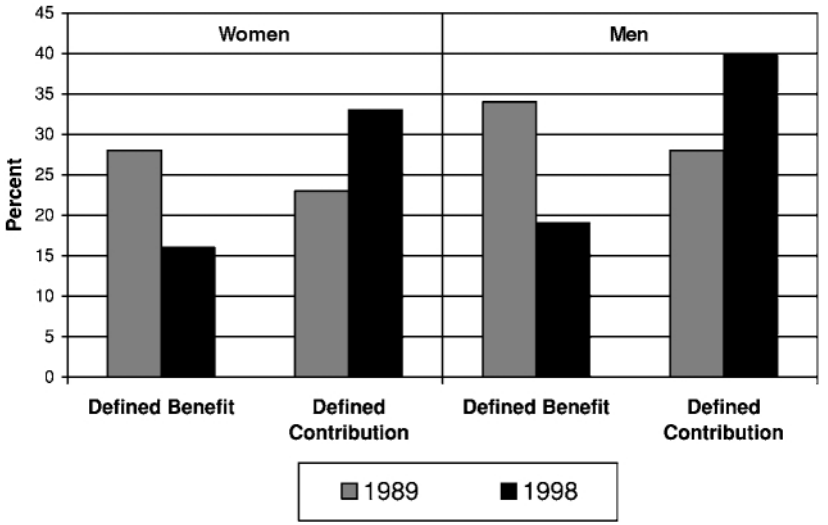

Figure 3 Pension participation of employeed individuals, aged 18–62, by gender, 1989 and 1998. Pension participation is defined as participation in at least one retirement plan with the current employer. Source: Bajtelsmit & Jianakoplos 2000, table 1.

(Beller & Lawrence 1992, Kusko et al. 1998, Munnell et al. 2000), firm size, and union membership. Employees of large firms are more likely to be offered a pension plan than workers in smaller firms for several reasons, including: (*a*) the types of jobs offered and workers hired by large employers (Even & Macpherson 1994a), (*b*) the greater economic resources and profitability that result from larger economic scale, and (*c*) an increased ability of workers in large firms to unionize and express collective power (Hodson 1986, Kalleberg et al. 1981). In addition, employers are less likely to offer a pension plan to part-time workers because pension laws allow firms to exclude these workers. Employment in the public sector and in specific industries is related to higher rates of pension sponsorship. Historically, the pension leaders have been large employers in manufacturing industries, which are heavily unionized and in which men traditionally have been concentrated. Finally, as workers age they are more likely to be offered a plan, although after mid-career pension access begins to decline (Yakoboski & Silverman 1993).

Gendered Inequalities: Women's Labor Force Participation and Pension Opportunities

Extensive research has demonstrated that the intersection of gender and the labor market is central to the process of the stratification of pension access. Given the close link between the labor market and the process that generates retirement income, the most crucial element affecting the ability to accumulate retirement

income is position within the labor market (O'Rand 2001). Although labor force participation varies by age and marital status, women's attachment to the labor market has increased over time for all groups, including married women (Blau 1998). Owing in part to an increase in years worked among women and in part to a decline in men's real earnings, the gender gap in wages has declined somewhat and the age-earnings profile has become more similar in shape for recent cohorts (O'Neill & Polachek 1993, Reskin & Padavic 1994).

Nevertheless, women continue to earn less than men—on average 76 cents for every dollar for full-time workers in 2001 (U.S. Bureau of Labor Statistics 2002). This is in part because of occupational segregation across industries. In addition, nearly a quarter of all female wage and salary workers are employed part-time, compared with just 11% of male wage and salary workers (U.S. Bureau of Labor Statistics 2002). Part-time positions tend to be concentrated in the lower level of the occupational structure. As a result, part-time workers tend not only to receive lower wages but also to be more vulnerable to unemployment and less likely to qualify for employer-sponsored fringe benefits.

Women are disadvantaged in the public and private pension arenas in part because they do not have the same job experiences as men. Retirement income is based on wage labor and on the gendered division of labor (Quadagno 1988). Occupational welfare is predicated on market experience. Similarly, social insurance (Social Security) also favors traditional marital arrangements (breadwinner couples) in which a primary wage earner supports a dependent spouse. Widows and otherwise unmarried women fall well below other groups in retirement income from both private and public sources (Harrington Meyer 1990, Harrington Meyer & Pavalko 1996). Income distribution in the aged 65 and older population reveals that women depend overwhelmingly on Social Security, and as they age they confront growing losses (of spouses and their income provision), diminishing assets, growing health care costs, and high risks for poverty (Smeeding 1997). Lower access to pensions for women workers contributes to their Social Security dependence.

Recent Trends in Pensions

Recent changes in the structure of employer pensions have created the need to be explicit about how we define and measure access and participation. Greater choice and individual control mean access and participation are no longer necessarily the same thing. The issue of measurement is important to the overall picture of employee participation in retirement plans. In the past, when DB plans dominated, the term pension "coverage" had been adequate to refer to workers with a pension plan. Whether a worker was participating in the plan was often not mentioned because for most plans participation was automatic after eligibility requirements were met. Critical to interpreting data on pension participation is the distinction between employer sponsorship, the sponsored participation rate, and the rate of employee participation. *Employer sponsorship* includes two employer-based decisions: first, whether to offer a retirement pension plan to a group of employees,

and second, which kind of plan(s) to offer (DB and/or DC). Rates of sponsorship represent the proportion of workers whose employer offers a pension plan. However, not all employees are eligible for benefits or actually participate in the plan. *Sponsored participation* is a measure of who participates in an offered plan, and rates show the ratio of participation to sponsorship. The *participation rate* is the ratio of the number of workers participating in an employer-sponsored plan to the total population of workers.

These three distinctions are very important, although they are not always clear in the literature. In addition to defining "coverage," one must also define the "total population" of workers before drawing conclusions about participation rates. For example, many participation rates exclude from the total population of workers the self-employed, part-time and younger workers, and public sector workers. These multiple layers and definitions are apparent in empirical evidence. Scholars must keep such distinctions in mind because they affect visible gender differences and conclusions about the share of workers with an employer-sponsored pension.

Overall, the gender gap in pensions is larger in the general population than it is among employed men and women (Shaw & Hill 2002), reflecting gender differences in labor market participation. On average, employed men and women are equally likely to work for an employer that offers a pension plan, but women are less likely than men to participate in an offered plan. As of 1999, the sponsorship rate for all male wage and salary workers was 64%, compared with 63% for women (Employee Benefits Security Administration 2001). Greater variation in the sponsored participation rate (81% for men and 74% for women) results in a gender difference in participation (52% for men and 47% for women) that is greater than if we look at sponsorship alone. Looking only at full-time workers in the private sector, this gender gap appears smaller, with 59% of men and 56% of women participating in an offered plan in 1999 (Purcell 2003).[1]

Munnell and colleagues (2002) present trends in pension sponsorship and participation over recent decades based on data from multiple years of the Current Population Survey (Figure 4). The figure demonstrates that rates of pension coverage vary according to definition (sponsorship versus participation) and the relevant population. The dotted and the solid lines represent the extremes of the share of workers covered by an employer pension. The dotted line indicates that in 1999, 68% of full-time workers, aged 25–64, had the opportunity to participate in an employer pension. The solid line represents the participation trend for all workers regardless of age or full-time status—a categorization that results in the lowest rates of pension coverage (43% in 1999). Across all populations the clear trend over time shows pension sponsorship and participation in 1999 at roughly the same level as in 1979. Both declined during the 1980s, but the period between 1988 and 2000 brought a return to 1970s levels (Munnell et al. 2002).

This trend is the result of offsetting changes in the pension experiences of men and women. An increase has occurred over time in the participation rates for women

[1]Based on data from the Contingent Work Supplement to the February 1999 Current Population Survey.

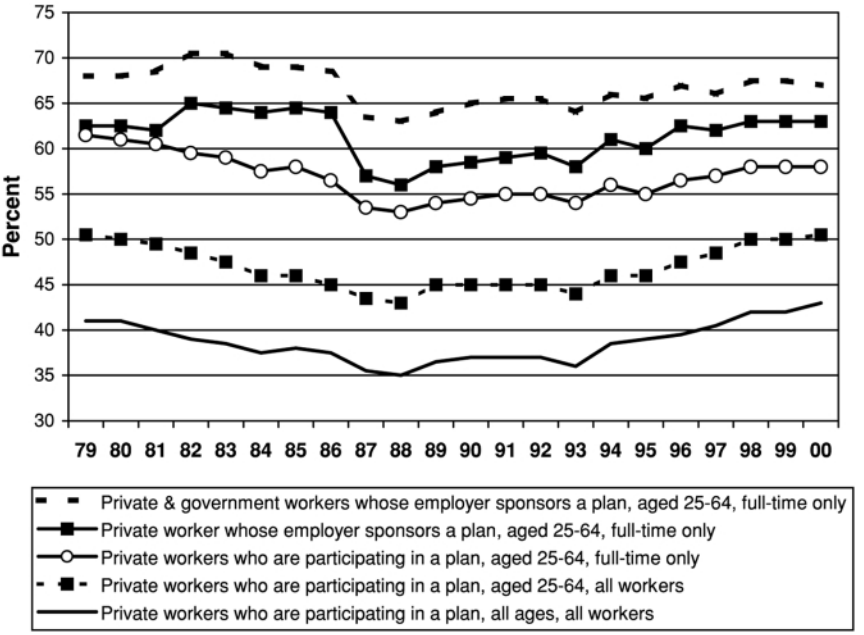

Figure 4 Pension sponsorship and participation, 1979–2000. Selected data is from multiple years of the Current Population Survey (Munnell et al. 2002, figure 1).

at all earnings levels owing in part to an overall increase in DC pension sponsorship in industries where women tend to be concentrated and where DB sponsorship has traditionally been low (Munnell et al. 2002). In contrast, men's participation has declined over time for workers at all earnings levels except the top quintile. Men's participation has decreased in conjunction with a shift in employment from the manufacturing sector to the service sector, which is less likely to provide workers with pensions (see Bloom & Freeman 1992, Even & Macpherson 1994b, Kruse 1995 for an analysis of the decline in pension sponsorship and coverage in the 1980s).

In short, worker access to and participation in pensions have changed. Critical trends include women's higher labor force participation, increased wages, and pension access. But for all workers, the pension system has shifted the risks for retirement saving from employers to workers. This change reflects the new employment contract and the new environment of risk faced by employers, insurers, and workers.

PENSIONS AS A HIERARCHY OF RISK

We propose that the pension system is a risk hierarchy in which the major actors in the system—employers, insurers, and workers—encounter noncomparable and sometimes conflicting risks based on their social locations. Corporations facing the high compensation costs of workers act to diminish their financial risks by

retreating from long-term liabilities. Governments and corporations face crises of underfunding of pension programs in response to changing demographics, tax policies, and market events. Third-party insurers and pension providers face the same risks as governments and other employers. Workers and their families, in turn, face the risk of noncoverage by pensions and other benefits, job loss, retirement income loss, and/or catastrophic health decline. Furthermore, in the changing pension environment, workers who do have access to pensions now incur financial risks in individual market investments outside the employment relationship.

Employer/Insurer Risk

Overall, the tax system in the United States encourages firms to provide pensions, and it attracts workers with the tax benefits that pensions provide (taxes on contributions and interest are deferred until benefit receipt). The market also constrains firms to offer benefit packages in order to remain competitive. However, employers offer DB plans or DC plans to different subgroups of workers based on risk calculations. In addition to providing tax benefits, DB plans also provide employers with a means to alter worker behavior, either by reducing worker turnover, increasing productivity, or (at later worker ages) inducing retirement. Firms in certain industries are likely to use pensions to influence worker behavior, particularly of workers who require extensive training (Johnson 1994). The sorting function of pensions is based on the hypothesis that certain workers are "stayers" and others are "movers"—pensions serve to attract the more desirable stayers to a firm. Evidence shows that DB plan rules result in reduced worker turnover (Mitchell 1982). Vesting rules threaten workers with benefit loss unless they meet tenure minimums. Backloaded benefit formulas raise the accrual of pension benefits with age or service and therefore reward long tenure. Finally, jobs that offer DB pensions also tend to offer higher wages than those in nonpension and DC-only sectors, which also reduces worker turnover.

Firms offer DC plans for different reasons. DC plans alone are more likely to be offered in smaller, nonunion firms. DC plans are less effective than DB plans at reducing worker turnover, and firms that offer them are usually less interested in this objective. Worker attraction to the tax benefits of DC pensions encourages some firms to offer these packages to remain competitive. Incentives for employers to offer DC plans are tied to the elimination of investment risk resulting from poor market performance and of long-term liabilities to aging retirees. DC plans, particularly those that allow plan participants to manage the investment of their own accounts, eliminate employer liability and provide workers with the flexibility and portability desirable in a volatile labor market (Goodfellow & Schieber 1993). In this way, the new pensions shift the risk for the provision of pension income from employers to workers (Clark & McDermod 1990).

Besides shifting more responsibility to workers, employer sponsorship of pensions and other forms of insurance has increasingly involved third-party vendors of protection, investment, and savings instruments. Heimer (1985) identified this

strategy by employers as a form of "reactive risk"—a response to demographic, state, and economic factors propelling employers to manage their own risks relative to other actors in the system. Employers try "to reduce losses by giving control over crucial loss-prevention activities to third parties who will not benefit from failing to carry them out" (Heimer 1985, p. 195). Hence, health and life insurance companies and equity and bond fund managers assume a new outsourced role once provided by employers (Jacoby 1985).

The insurers compete for market shares of worker participants and face the economic exigencies that bear upon their products: Health insurance companies must confront escalating health care costs and the capacities of workers to carry higher premium and copayment charges; pension managers must provide an attractive array of investment instruments and encourage higher worker contributions. Moreover, they must scan the demographic horizon with projections of retirement rates and fund spend-down schedules. The impending retirement of the baby-boom cohorts, who are extensively invested in DC plans, presents risks to these vendors as well as to the federal Social Security system (Gordon et al. 1997).

Worker Risk

With increased reliance on individualized retirement accounts, workers face the risk of not accumulating enough resources during their working years to meet their needs in later life. They may live longer than they had anticipated, experience job loss, or have unexpected health declines that force them to leave the labor market sooner than expected. Also, the new pension environment presents diverse risks to groups of workers, including those who: (*a*) are employed in a nonpension job, (*b*) have access to a pension but decline participation, (*c*) make poor investment choices or do not contribute an adequate amount to their pension account, or (*d*) lose pension wealth over the course of their working years by spending (or borrowing from) preretirement distributions or as the result of economic fluctuations that reduce the size of accumulated pension accounts.

JOBS WITH PENSION OFFERS Scholars offer competing explanations for the inequalities in access to fringe benefits such as pensions. Human capital arguments suggest that jobs with labor market benefits will be available to all individuals who develop requisite education, skills, or experience. Gender or race differences in access to benefits are attributable to differences in human capital formation (for a review, see Seccombe & Beeghley 1992). Alternatively, structural explanations (Bielby & Baron 1986, England 1992, Reskin 1993, O'Rand 1986) propose that women and minority workers are less likely to have pension jobs because they are underrepresented in the types of firms, industries, and occupations where plan sponsorship is most common. Occupational segregation and the discriminatory practices of employers are implicated in this explanation.

In contrast, according to the theory of compensating differentials, responsibility for access to benefits lies with the individual rather than with the labor market structure. Certain categories of workers, particularly women and low-wage

workers, do not demand benefits from their employers because they prefer a higher wage in place of fringe benefits and/or more flexibility to enter and exit the labor market without wage penalties (Ehrenberg 1980, Montgomery et al. 1992, Smith 1979). Women, who have lower average incomes, are less likely to demand pensions. And, arguably, for women the tax advantages of pensions are limited because lower incomes are subject to a lower marginal tax rate.[2] Likewise, Polachek (1979) has proposed that occupational segregation results from women's choices of occupations in which lesser skills bring better rewards and fewer penalties for interrupted work owing to domestic and childrearing responsibilities.

However, the compensating differentials argument is not supported by empirical evidence. Consistent evidence of a tradeoff between wages and benefits does not exist (Mitchell & Pozzebon 1987, Korczyk 1993). Most researchers have found that jobs that offer employees a pension also pay higher wages (Dorsey 1982, Ippolito 1985). As for women's preference for jobs with greater flexibility, the evidence suggests that women are concentrated in occupations that are actually the least flexible, characterized by higher supervision, less autonomy, and less flexibility in scheduling than male-dominated occupations (England 1982, 1984).

Additional evidence suggests a more complex interplay among human capital, the structure of pension opportunities, and individual preferences for employment and saving than any of the above theoretical frameworks permit. Johnson (1994) examined heterogeneity in the value that workers place on employer-sponsored pensions. Using data from the Health and Retirement Study (HRS), he explored the relationship between individual preferences (including risk aversion and planning horizon) and whether workers sort themselves into jobs that offer pensions. He found that workers who are in a pension job, even though they fit the profile of a noncovered worker (lower wages, lower tenure), are more likely to exhibit preferences for deferred compensation and aversion to risk. However, one difficulty with this analysis is whether workers with certain preferences sort themselves into pension jobs or develop these preferences once they are presented with opportunities on the job.

PARTICIPATION IN OFFERED PLANS As late as 1979, roughly 97% of men and 93% of women who were offered a plan participated in the plan. By 1999 this had declined to 81% for men and 74% for women (Employee Benefits Security Administration 2001). Lessened paternalism and greater individual choice in pension decision making have increased attention to pension participation as one form of saving behavior. In general, saving is more difficult for some groups than it is for others. Lower-saving groups include the less educated, those with low-income levels, minorities, the unmarried, and people with children regardless of marital status (Bosworth et al. 1991, Kennickell et al. 1997). Some groups do not have

[2]This is also offered as an explanation of employer behavior—lower demand from women means that firms in female-dominated industries do not need to offer a pension to attract workers.

enough income to adequately sustain life in the present, let alone to save for the future. However, membership in one or more of these groups does not preclude the possibility of saving current money for future consumption. Nor is exclusion from these groups synonymous with aggressive saving behavior.

There are a number of economic theories of saving. The most widely adopted is the life-cycle model of saving (Friedman 1957, Modigliani & Brumberg 1954). It states that people strive to level consumption over their lifetimes and save money in order to avoid drastic changes in living standards during periods when incomes fluctuate, such as in retirement. The model predicts that rational individuals save during their working careers and deplete accumulated resources in retirement, striving either to spend down assets by the time of death or to retain an amount to bequest to others, depending on preferences.

Literature in the psychology of saving relies less on the life cycle of the household and the maintenance of consumption over the life course and focuses more on behavioral patterns derived from life experiences (Barsky et al. 1997; Bernheim 1991; Kahneman & Tversky 1979; Tversky & Kahneman 1991, 1992). These approaches reject the assumption of a uniform structure of motivation that anchors economic theories of saving, like the life-cycle model, and acknowledge the relevance of measuring behaviors and states of mind, such as preferences for risk and deferred compensation, assumed to be unobservable in life-cycle models (Hardy & Hazelrigg 2001, Manski 1990).

Some states of mind have been linked to higher rates of saving both among those in typically low-saving groups as well as in high-saving groups. One example is the concept of discounting, which refers to the value that one places on the future (relative to the present). Assumptions regarding the uniformity of discount rates (assumed stable across individuals and within households) have been challenged by research that has identified heterogeneity across subgroups in the population (for example, age groups and wealth levels) and explored the link between discount rates and saving current income for future consumption (Loewenstein 1992). For example, some groups/individuals may have high discount rates because of compromised current economic security, whereas others may value present well-being over future well-being. Research in this area suggests that, net of the ability to save, workers with long-term orientations toward saving and those who are risk averse are more likely to participate in a pension plan and more likely to save overall (Ippolito 1992, Korczyk 1998, Munnell et al. 2000, Shuey 2004). Aversion to risk would make pensions more appealing—particularly those that provide benefits in the form of annuities that pay fixed installments until death (Hubbard 1987, Johnson 1994).

RISK AVERSION AND INVESTMENT DECISIONS Under DC plans, workers rather than employers bear the majority of investment risks. Participants in DC plans (and increasingly DB plans) often face choices between forms of investment of their pension assets, such as between stocks and bonds. These investment forms have different levels of risk and rates of return. Whereas investment in the stock

market was once viewed as too risky for the working and middle classes, these groups now must embrace higher levels of financial risk (Simon 2002).

Aversion to risk often translates into greater conservatism in financial decision making, and it has been linked to more conservative investing in DC plans (Barsky et al. 1997, Goodfellow & Schieber 1993, Hinz et al. 1997). Research suggests that certain groups are more risk averse than others. Risk aversion is higher for women (see Hinz et al. 1997, Bajtelsmit & VanDerhei 1997, Barsky et al. 1997, Riley & Chow 1992, Sundén & Surette 1998), minorities, older persons, and low-income households (Goodfellow & Schieber 1993). Some evidence suggests that the primary determinants of risk aversion are age, followed by income and gender (Lewellen et al. 1977). Bajtelsmit & VanDerhei's (1997) analyses of the investment decisions of those covered under DC plans, which generally give workers the choice of investment strategy, found that women were less likely to make high-risk investment decisions. Other multivariate analyses of participants in the federal government's DC plan support a relationship between gender and risk aversion, showing that women are more conservative investors of pension assets, even after controlling for salary, other family income, age, and marital status (Hinz et al. 1997). Being married, net of other factors, has a negative effect on risk taking. However, married women are the most conservative investors and unmarried men the least conservative—thus, characteristically, married men and unmarried women take similar investment risks.

Risk-averse decisions have been linked in the economics literature cited above to lower levels of financial success, although there is no evidence for causality. Such studies suggest that if certain groups (particularly women and minorities who already have lower income and wealth) have different risk preferences and conduct their retirement planning accordingly, then wealth differentials in retirement are likely to increase as the pension environment requires more individual choice of investment. Because lower risk portfolios have lower expected returns, gender differences in pension wealth may grow over the life course and result in an even greater gender gap in pension wealth in the future.

PORTABILITY AND PENSION LEAKAGE Not all employees who participate in a pension plan are vested in their plan. Therefore, when participants change jobs, not all are entitled to receive either immediate or future benefits from their participation. Vesting rules are particularly significant for the pension benefits of women, whose careers are characterized by frequent job changes and short tenures. With earlier vesting, DC plans make employer pensions more portable. Thus, workers can reduce pension loss resulting from job change.

Upon leaving their jobs, workers have the option to shift accumulated assets to another account or to take them in the form of a lump-sum payment. Aside from tax penalties designed to encourage saving, workers who receive lump-sum distributions can spend or save the money as they choose. Thus, rather than lose pension assets through restrictive vesting provisions, recipients of cash settlements may gain access to the assets but nevertheless lose pension wealth by spending

rather than reinvesting the settlement (see, for example, Andrews 1991, Burman et al. 1999, Hardy & Shuey 2000, Piacentini 1990, Scott & Shoven 1996). Research suggests that women are at greater risk than men of pension leakage from DC plans, with only 27% of women rolling over the funds into a retirement account compared with 36% of men (Shaw & Hill 2002). Finally, workers may borrow from their plans for extraordinary needs (such as college tuition or excess health costs) and repay within limited periods or run the risk of tax penalties; this presents another potential source of leakage and flattens the trajectory of asset accumulation.

THE PROBLEM OF LIMITED PENSION KNOWLEDGE Before ending this discussion of the pension risk process for workers, a final observation is necessary. A recent study (based on the HRS) of workers between the ages of 51 and 61 in 1992 matched worker pension claims with employer records (see Gustman & Steinmeier 1999). The result was that slightly less than half of workers agreed with their employers on the type(s) of pension plans they were covered by (i.e., DB, DC, or mixed DB/DC). Although this was not the first time that research has uncovered the limitations of workers' knowledge of their pension plans, the appearance of these findings from the major U.S. national study of health and retirement in late middle age added fuel to the debates over the privatization of Social Security.

Household Risk

Perhaps the most understudied aspect of the pension system is the family or household context of pension planning and coordination. As summarized earlier, recent studies have begun to identify gender differences in pension and saving behavior. These studies usually cannot distinguish underlying gender differences from exogenous household differences in financial planning, even if they control for marital status. Yet it is plausible to expect that households may vary in the complementarity of their market behaviors (see Treas 1993). Couples may specialize in benefit participation over time to maximize household saving; one partner may engage in more risk-seeking equity markets in a pension, while the other maintains a less risky bond portfolio. Similarly, one partner may provide health insurance coverage and participate less in pension saving, while the other shelters a higher portion of his/her compensation in DC plans.

Studies that model the joint retirement decision (Henretta & O'Rand 1983, Henretta et al. 1993, Hurd 1990, Johnson & Favreault 2001) and participation in employer-sponsored health insurance (Buchmueller 1996, Harrington Meyer & Pavalko 1996) provide a starting point for understanding these processes. The repeated finding across studies of cohorts of mature couples between the 1970s and the 1990s was the tendency to coordinate retirement. Couples tended to retire together as closely as possible in time. More recent cohorts in the 1990s are displaying a tendency for women to remain at work after their husbands retire in response to their own pension and/or health insurance coverage and preferences for work (O'Rand & Farkas 2002). The implication of this recent trend for gender-related

pension behavior is that the concurrence of women's higher educational levels, extended labor force participation, and sustained pension participation with changing marital patterns and marital cultures may produce different gender patterns of risk aversion in the future. Besides showing stronger individual commitments to work than in the past, both men and women also reflect diverse marital histories including longer periods of singlehood, higher rates of divorce, and delayed patterns of childbearing in the life course (Blau 1998).

Some economists are proposing game-theoretic frameworks to account for a pattern of increased individualization of preferences within couples. Lundberg (1999) distinguishes between the joint utility (unitary) and family bargaining models. The former assumes that couples incorporate each other's preferences in their market decisions. The latter assumes separate and noncooperative preferences and behaviors. Sociological approaches, in contrast, attempt to account for both patterns using a life course perspective that considers variations in the history of the marriage/partnership. Marital relationships are diverse and develop over time. Couples pursuing work careers over the duration of the marriage make joint role investments in work and family roles and thus approach retirement differently than others who have specialized in traditional gendered family roles. Couples who have invested in their individual careers, have commitments to the workplace, and have their own pensions tend to make more individualized retirement decisions than couples without such joint role investments. In addition, depending on the characteristics of partners' individual careers and their timing, stability, and mobility, the bargains they strike with respect to investment and saving may shift over the life of the relationship. Hence, different family economies may reflect diverse couple arrangements that develop and change over time in response to individual contingencies and household needs.

CONCLUSIONS AND FUTURE DIRECTIONS FOR RESEARCH

Choice and chance in the pension system and the pervasiveness of risk across levels of the system challenge life course researchers to consider the interplay of structural risk and individual choice across the life span. Employers, insurers, and workers participate in a system of shifting resources and responsibilities. Employers and insurers perceive demographic, financial, and investment risks that alter their policies toward workers. The major trend in these policies is toward displacing risk to the worker. Future research must attend to the linkages between employers and insurers and to the impact of these policies on work lives and retirements, on worker and household decision making in the context of risk, and on widening inequality.

Changing compensation costs associated with employee benefits have motivated employers to use DC plans and to cut back on benefits for retirees. In addition, employers are beginning to suspend matching contributions to workers'

401(k) accounts. Meanwhile, pension shortfalls and bankruptcies loom in DB funds. All these changes have implications for the income security of workers.

However, pensions are only one component of a complex package of work-supported insurance. Pensions (public and employer-sponsored), health insurance (public and private), worker's compensation and disability insurance, among other benefits, are inextricably intertwined in the occupational welfare system. Changes in one influence changes in others. The trend in the individualization of pensions and other benefits may increase access to these forms of insurance, but it may also result in greater health, income, and wealth disparities. Workers who are disadvantaged in access to one benefit are more likely to be disadvantaged in all. Poor choices in employer pensions will be associated with poor choices in individualized Social Security accounts. And the potential disappearance of collectively assured safety nets is likely to increase inequality.

The surge in wage inequality since the 1980s has been accompanied by an increase in pension inequality. Although DC plans have made pensions more widely available in the workplace, their dependence on individual prerogatives and capacities to participate are likely to increase inequality in U.S. populations in the future. Segments of the baby-boom cohorts, whose life expectancies are projected to extend at least two decades beyond Social Security and Medicare eligibility, will be the first to enter retirement after having participated partly or entirely in DC plans over their careers. The inequality in pension wealth in these cohorts is extreme, ranging from high levels of wealth and generous bequests for survivors at one pole and significant levels of near poverty at the other (Hughes & O'Rand 2004).

Preference, Knowledge, and Choice

The individualization of pensions introduces a set of new questions and a demand for new variables for studying choice and decision making in the workplace (Hardy 2000). Besides human capital characteristics and labor market structures of pension access and participation, new individual and structural variables are needed to model the risk process. The first set of variables consists of direct indicators of individual preferences. Measures of preferences for deferred compensation would allow us to examine how such preferences interact with structural and status characteristics such as income, gender, and labor market position to influence participation decisions. Moreover, preferences may vary or change across the work career in the extended process of pension participation; that is, different preferences and contingencies may influence the selection of a job, the decision to participate in a sponsored plan, and the level of contribution to it, successively. Participants with a high tolerance for risk may, for example, pass over participation in a sponsored plan in exchange for greater disposable income at the beginning of a career. Later in the career, the availability of pensions or health insurance may become more salient. Therefore, selection and endogeneity in the (self-)sorting of workers into jobs, pension plans, and investment risk categories deserve scrutiny.

A second set of variables relates to workers' knowledge of the structure of their benefits and, in the case of DC plans, their knowledge of pension rules that apply to their own accounts, equity and bond investing, market cycles, and so on. Research has uncovered uneven levels of knowledge about benefits in the workplace that are correlated with age, educational level, occupational status, and workplace culture (O'Rand 2003; Gustman & Steinmeier 1999, 2001). This unequal understanding of the pension system is exacerbated by the seemingly continuous change in benefit structures and rules of participation. Hence, worker knowledge and worker preferences need more attention in the study of pension behavior, retirement decisions, and economic inequality in retirement.

But understanding workers' knowledge of their benefits also requires a multilevel approach. Besides developing the individual-level measures noted above, employer-level measures are also required. First, by matching employee claims regarding benefit coverage with employer records of their coverage, a more accurate estimate of workers' knowledge is possible. This has been done using the Survey of Consumer Finances, the National Longitudinal Surveys, and the Health and Retirement Study during the past decade and a half and has revealed substantial mismatches between what workers think they have and what they actually have according to employer records. Second, employer-level variables could also include measures of the "culture of pension knowledge." For example, the extent and regularity with which employers and insurers provide information and advice to workers contributes to a culture of pension awareness and understanding. The provision of information on benefits varies widely by firm size and industrial context. But even within sectors, personnel policies related to regular benefit information dissemination vary. Events such as annual benefit fairs, preretirement workshops, and similar organizational activities, if they occur, are limited to relatively prosperous work environments. In smaller work environments, the primary (if not sole) information source is the quarterly report from a vendor to the plan participant—a document often undecipherable even by a well-educated worker. The extent of circulation of information also encourages knowledge sharing among workers.

Interdependence of Decision Making

One contingency influencing worker preferences stems from variations in household economies over the work career. Women's increased attachment to the workplace has increased the number of dual-earner households. Researchers have begun to look at retirement decisions as a household issue, but more attention must be directed to risk sharing over the marriage or partnership in savings and investments. Future pension research should move beyond human capital, structural constraints, and individual preferences and knowledge to also incorporate family dynamics.

Retirement planning involves decisions by maturing households about deferred income. One question is whether working spouses/partners view pensions similarly and coordinate participation in ways that are complementary, such as by matching

different levels of risk seeking and risk aversion across benefit choices. Even though women may be gaining access to pension plans, their decisions regarding when to participate and what risks to take may be contingent on their partners' coverage and risk preferences. Few studies address the coordination of pension decisions within the family (examples are Shuey 2004, Sung & Hanna 1998, Uccello 2000). Alternatively, future cohorts of men and women who have worked under a regime of DC pensions and other individual savings structures throughout their careers may approach financial planning, workforce commitments, and retirement decisions with highly variable preferences and unequal resources that have developed from the individual choices they have made over their lives.

In short, the new pension environment has introduced new risks for workers as employers retreat from long-term liabilities. Sociologists can benefit by taking explicit account of these risk processes and the workplace and household contexts within which they occur. This will require linking ideas from behavioral economics with the sociology of labor markets, work, and family.

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LITERATURE CITED

Andrews ES. 1991. Retirement savings and lump-sum distributions. *Benefits Q.* 2:47–58

Arrow K. 1971. *Essays in the Theory of Risk-Bearing*. Chicago, IL: Markham

Bajtelsmit VL, Jianakoplos NA. 2000. *Women and pensions: a decade of progress?* Issue Brief 227. Washington, DC: Empl. Benefit Res. Inst.

Bajtelsmit VL, VanDerhei JL. 1997. Risk aversion and pension investment choices. In *Positioning Pensions for the Twenty-First Century*, ed. MS Gordon, OS Mitchell, MM Twinney, pp. 45–66. Philadelphia, PA: Pension Res. Counc.

Baker T, Simon J. 2002a. Embracing risk. See Baker & Simon 2002b, pp. 1–25

Baker T, Simon J, eds. 2002b. *Embracing Risk: The Changing Culture of Insurance and Responsibility*. Chicago, IL: Univ. Chicago Press

Barsky RB, Juster TF, Kimball MS, Shapiro MD. 1997. Preference parameters and behavioral heterogeneity: an experimental approach in the health and retirement study. *Q. J. Econ.* 112:537–79

Beller DJ, Lawrence HH. 1992. Trends in private pension coverage. In *Trends in Pensions, 1992*, ed. JA Turner, DJ Beller, pp. 59–96. Washington, DC: US Dep. Labor

Berg I, Kalleberg A, eds. 2001. *Sourcebook of Labor Markets: Evolving Structures and Processes*. New York: Kluwer Academic/Plenum

Bernheim BD. 1991. *The Vanishing Nest Egg: Reflections on Saving in America*. New York: Priority

Bielby WT, Baron JN. 1986. Men and women at work: sex segregation and statistical discrimination. *Am. J. Sociol.* 91:759–99

Blau FD. 1998. Trends in the well-being of American women, 1970–1995. *J. Econ. Lit.* 36:112–65

Bloom DE, Freeman RB. 1992. The fall in private pension coverage in the U.S. *Am. Econ. Rev.* 82(2):539–45

Bosworth B, Burtless G, Sabelhaus J. 1991. The decline in saving: evidence from household surveys. *Brook. Pap. Econ. Act.* 1:183–241

Buchmueller TC. 1996. Marital status, spousal coverage, and the gender gap in employer-sponsored health insurance. *Inquiry* 33:308–16

Burman LE, Coe NB, Gale WG. 1999. *What Happens When You Show Them the Money?*

Lump Sum Distributions, Retirement Income Security, and Public Policy. Final Rep. 06750–003. Washington, DC: Urban Inst.

Clark RL, McDermed AA. 1990. *The Choice of Pension Plans in a Changing Regulatory Environment*. Washington, DC: Am. Enterprise Inst.

Dorsey S. 1982. A model and empirical estimates of worker pension coverage in the U.S. *South. Econ. J.* 49:506–20

Douglas M. 1986. *How Institutions Think*. Syracuse, NY: Syracuse Univ. Press

Douglas M, Wildavsky A. 1982. *Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers*. Berkeley: Univ. Calif. Press

Ehrenberg RG. 1980. Retirement system characteristics and compensating wage differentials in the public sector. *Ind. Labor Relat. Rev.* 33:470–83

Empl. Benefits Secur. Admin. 2001. *Coverage Status of Workers Under Employer Provided Pension Plans: Findings from the Contingent Work Supplement to the February 1999 Current Population Survey*. Washington, DC: US Dep. Labor

England P. 1982. The failure of human capital theory to explain occupational sex segregation. *J. Hum. Resour.* 17:358–70

England P. 1984. Wage appreciation and depreciation: a test of neoclassical economic explanations of occupational sex segregation. *Soc. Forces* 62:726–45

England P. 1992. *Comparable Worth: Theories and Evidence*. New York: Aldine de Gruyter

Esping-Andersen G. 1999. *Social Foundations of Postindustrial Economies*. New York: Oxford Univ. Press

Even WE, Macpherson DA. 1993. The decline of private-sector unionism and the gender wage gap. *J. Hum. Resour.* 28:279–96

Even WE, Macpherson DA. 1994a. Employer size and compensation: the role of worker characteristics. *Appl. Econ.* 26:897–907

Even WE, Macpherson DA. 1994b. Why did male pension coverage decline in the 1980s? *Ind. Labor Relat. Rev.* 47:439–53

Friedman M. 1957. *A Theory of the Consumption Function*. Princeton, NJ: Princeton Univ. Press

Goodfellow GP, Schieber SJ. 1993. The role of tax expenditure in the provision of retirement income security. In *Pensions in a Changing Economy*, ed. R Burkhauser, D Salisbury, pp. 79–94. Washington, DC: Empl. Benefit Res. Inst.

Gordon MS, Mitchell OS, Twinney MM, eds. 1997. *Positioning Pensions for the Twenty-First Century*. Philadelphia: Pension Res. Counc./Univ. Penn. Press

Gustman AL, Steinmeier TL. 1999. *What people don't know about their pensions and social security: an analysis using linked data from the Health and Retirement Study*. Work. Pap. 7368, Nat. Bur. Econ. Res., Cambridge, Mass.

Gustman AL, Steinmeier TL. 2001. *Imperfect knowledge, retirement and saving*. Work. Pap. 8406, Nat. Bur. Econ. Res., Cambridge, Mass.

Hardy MA. 2000. Control, choice, and collective concerns: challenges of individualized social policy. In *The Evolution of the Aging Self: The Societal Impact on the Aging Self*, ed. KW Schaie, J Hendricks, pp. 251–68. New York: Springer

Hardy MA, Hazelrigg L. 2001. *Status and Cognitive Components of Saving Behavior*. AARP Andrus Found. Final Rep., Pepper Inst. Aging Public Policy, Tallahassee, Fla.

Hardy MA, Shuey KM. 2000. Pension decisions in a changing economy: gender, structure, and choice. *J. Gerontol. B* 55:S271–77

Harrington Meyer M. 1990. Family status and poverty among older women: the gendered distribution of retirement income in the United States. *Soc. Probl.* 37:551–63

Harrington Meyer M, Pavalko EK. 1996. Family, work and access to health insurance among mature women. *J. Health Soc. Behav.* 37:311–25

Heimer CA. 1985. *Reactive Risk and Rational Action: Managing Moral Hazard in Insurance Contracts*. Berkeley: Univ. Calif. Press

Heimer CA. 1988. Social structure, psychology

and the estimation of risk. *Annu. Rev. Sociol.* 14:491–519

Heimer CA. 2002. Insuring more, insuring less: the costs and benefits of private regulation through insurance. See Baker & Simon 2002b, pp. 116–45

Henretta JC, O'Rand A. 1983. Joint retirement in the dual worker family. *Soc. Forces* 62:504–20

Henretta JC, O'Rand A, Chan CG. 1993. Joint role investments and synchronization of retirement: a sequential approach to couples' retirement timing. *Soc. Forces* 71:981–1000

Hinz RP, McCarthy DD, Turner JA. 1997. Are women conservative investors? In *Positioning Pensions for the Twenty-First Century*, ed. MS Gordon, OS Mitchell, MM Twinney, pp. 91–103. Philadelphia, PA: Pension Res. Counc.

Hodson R. 1986. Modeling the effects of industrial structure on wages and benefits. *Work Occup.* 13:488–510

Hubbard G. 1987. Uncertain lifetimes, pensions and individual saving. In *Issues in Pension Economics*, ed. Z Bodie, JB Shoven, DA Wise, pp. 175–210. Chicago, IL: Univ. Chicago Press

Hughes ME, O'Rand AM. 2004. *The Lives and Times of the Baby Boomers*. Census 2000 Monograph. Washington, DC: Popul. Ref. Bur/Russell Sage

Hurd MD. 1990. The joint retirement decision of husbands and wives. In *Issues in the Economics of Aging*, ed. DA Wise, pp. 231–54. Chicago, IL: Univ. Chicago Press

Inst. Med. 2002. *Care Without Coverage: Too Little, Too Late*. Washington, DC: Natl. Acad. Press

Ippolito RA. 1985. The economic function of underfunded pension plans. *J. Law Econ.* 28:611–51

Ippolito RA. 1992. Selecting out high discounters. In *Current Pension Policy Issues*, pp. 16–27. Miami, OH: Cent. Pension Retire. Res.

Jacoby SM. 2001. Risk and the labor market: societal past as economic prologue. See Berg & Kalleberg 2001, pp. 31–60

Jacoby SM. 1985. *Employing Bureaucracy: Managers, Unions, and the Transformation of Work in American Industry, 1900–1945*. New York: Columbia Univ. Press

Johnson RW. 1994. *The impact of worker preferences on pension coverage in the HRS*. Work. Pap. 94-018, Popul. Stud. Cent. Publ., Univ. Mich., Ann Arbor

Johnson RW, Favreault MM. 2001. *Retiring Together or Working Alone: The Impact of Spousal Employment and Disability on Retirement Decisions.* Res. Pap. Washington, DC: Urban Inst.

Kahneman D, Tversky A. 1979. Prospect theory. *Econometrica* 47:263–91

Kalleberg AL, Wallace M, Althauser R. 1981. Economic segmentation, worker power, and income inequality. *Am. J. Sociol.* 87:651–83

Kennickell AB, Starr-McCluer M, Sundén A. 1997. Family finances in the U.S.: recent evidence from the survey of consumer finances. *Fed. Reserve B.* 83:1–24

Korczyk SM. 1992. Gender and pension coverage. In *Trends in Pensions, 1992*, ed. JA Turner, DJ Beller, pp. 120–33. Washington, DC: USGPO

Korczyk SM. 1993. Gender issues in employer pensions policy. In *Pensions in a Changing Economy*, ed. R Burkhauser, D Salisbury, pp. 59–65. Washington, DC: Empl. Benefit Res. Inst.

Korczyk SM. 1998. *How Americans Save*. Washington, DC: AARP

Kruse DL. 1995. Pension substitution in the 1980s: Why the shift toward defined contribution? *Ind. Relat.* 34:218–41

Kusko AL, Poterba JM, Wilcox DW. 1998. Employee decisions with respect to 401(k) plans. In *Living with Defined Contribution Pensions: Remaking Responsibility for Retirement*, ed. OS Mitchell, SJ Schieber, pp. 98–112. Philadelphia: Pension Res. Counc./Univ. Penn. Press

Levy F. 2000. *New Dollars and Dreams: American Incomes and Economic Change*. New York: Russell Sage Found.

Lewellen WG, Lease RC, Schlarbaum GG.

1977. Patterns of investment strategy and behavior among individual investors. *J. Bus.* 50:296–333

Loewenstein G. 1992. The fall and rise of psychological explanations in the economics of intertemporal choice. In *Choice Over Time*, ed. G Loewenstein, J Elster, pp. 3–34. New York: Russell Sage Found.

Lundberg SJ. 1999. Family bargaining and retirement behavior. In *Behavioral Dimensions of Retirement Economics*, ed. H Aaron, pp. 253–72. Washington, DC: Brookings Inst./Russell Sage Found.

Manski CF. 1990. The use of intentions data to predict behavior. *J. Am. Stat. Assoc.* 85:934–40

Mitchell OS. 1982. Fringe benefits and labor mobility. *J. Hum. Resour.* 17:286–98

Mitchell OS, Pozzebon S. 1987. *Wages, pensions and the wage-pension tradeoff*. Work. Pap., Dep. Labor Econ., Cornell Univ.

Modigliani F, Brumberg R. 1954. Utility analysis and the consumption function: an interpretation of the cross-section data. In *Post-Keynesian Economics*, ed. K Kurihara, pp. 388–436. New Brunswick, NJ: Rutgers Univ. Press

Montgomery E, Shaw K, Benedict ME. 1992. Pensions and waves: an hedonic price theory approach. *Int. Econ. Rev.* 33:111–28

Munnell AH, Sundén A, Lidstone E. 2002. *How Important Are Private Pensions?* Issue Brief 8. Chestnut Hill, MA: Cent. Retire. Res., Boston Coll.

Munnell AH, Sundén A, Taylor C. 2000. *What determines 401(K) participation and contributions?* Work. Pap. 2000-12, Cent. Retire. Res., Boston Coll.

Munnell AH, Soto M. 2003. *The outlook of pension contributions and profits in the U.S.* Work. Pap. 2003–13, Cent. Retire. Res., Boston Coll.

Olsen K, VanDerhei J. 1997. *Defined Contribution Plan Dominance Grows Across Sectors and Employer Sizes, While Mega Defined Benefit Plans Remain Strong: Where We Are and Where We Are Going*. Issue Brief 190. Washington, DC: Empl. Benefit Res. Inst.

O'Neill J, Polachek S. 1993. Why the gender gap in wages narrowed in the 1980s. *J. Labor Econ.* 11:205–28

O'Rand AM. 1986. The hidden payroll: employee benefits and the structure of workplace inequality. *Sociol. Forum* 1:657–81

O'Rand AM. 2000. Risk, rationality and modernity: social policy and the aging self. In *The Evolution of the Aging Self: The Societal Impact on the Aging Self*, ed. KW Schaie, J Hendricks, pp. 225–49. New York: Springer

O'Rand AM. 2001. Perpetuating women's disadvantage: trends in US private pensions, 1976–95. In *Women, Work and Pensions: International Issues and Prospects,* ed. J Ginn, D Street, S Arber, pp. 230–56. Buckingham, UK: Open Univ. Press

O'Rand AM. 2003. The future of the life course: late modernity and life course risks. In *Handbook of the Life Course*, ed. JT Mortimer, MJ Shanahan, pp. 693–701. New York: Plenum

O'Rand AM, Farkas JI. 2002. Couples' retirement timing in the United States in the 1990s. *Int. J. Sociol.* 32:11–29

Piacentini JS. 1990. *Preservation of Pension Benefits*. Issue Brief 98. Washington, DC: Empl. Benefit Res. Inst.

Polachek SW. 1979. Occupational sex segregation among women: theory, evidence and a prognosis. In *Women in the Labor Market*, ed. C Lloyd, pp. 137–57. New York: Columbia Univ. Press

Purcell PJ. 2003. *Pensions and Retirement Savings Plans: Sponsorship and Participation*. CRS Report for Congress. Washington, DC: Congressional Res. Serv.

Quadagno J. 1988. Women's access to pensions and the structure of eligibility rules: systems of production and reproduction. *Sociol. Q.* 29:541–58

Rappaport AM, Schieber SJ, eds. 1993. *Demography and Retirement: The Twenty-First Century*. Westport, CT: Praeger

Reskin BF. 1993. Sex segregation in the workplace. *Annu. Rev. Sociol.* 19:241–70

Reskin BF, Padavic I. 1994. *Women and Men at Work*. Thousand Oaks, CA: Pine Forge

Riley WB Jr, Chow VK. 1992. Asset allocation and individual risk aversion. *Financ. Anal. J.* 48:32–37

Scott JS, Shoven JB. 1996. *Lump-Sum Distributions: Fulfilling the Portability Promise, or Erroding Retirement Security?* Issue Brief 178. Washington, DC: Empl. Benefit Res. Inst.

Seccombe K, Beeghley L. 1992. Gender and medical insurance: a test of human capital theory. *Gender Soc.* 6:283–300

Shaw L, Hill C. 2002. *The Gender Gap in Pension Coverage: What Does the Future Hold?* Rep. D447. Washington, DC: Inst. Women's Policy Res.

Shuey K. 2004. Worker preferences, spousal coordination, and participation in an employer-sponsored pension. *Res. Aging* 26:287–316

Simon J. 2002. Taking risks: extreme sports and the embrace of risk in advanced liberal societies. See Baker & Simon 2002b, pp. 177–208

Smeeding T. 1997. *Reshuffling responsibilities in old age: the United States in comparative perspective*. Work. Pap. 153, Luxembourg Income Study, Maxwell Sch. Citizsh. Public Aff., Syracuse, NY

Smith R. 1979. Compensating wage differentials and public policy: a review. *Ind. Labor Relat. Rev.* 32:239–52

Stewart GB. 2003. Pension roulette. *Harv. Bus. Rev.* 81:104–9

Sundén AE, Surette BJ. 1998. Gender differences in the allocation of assets in retirement savings plans. *Am. Econ. Rev.* 88:207–11

Sung J, Hanna S. 1998. The spouse effect on participation and investment decisions for retirement funds. *Financ. Couns. Plan.* 92:47–58

Treas J. 1993. Money in the bank: transaction costs and the economic organization of marriage. *Am. Sociol. Rev.* 58:723–34

Tversky A, Kahneman D. 1974. Judgement under uncertainty: heuristics and biases. *Science* 185:1124–31

Tversky A, Kahneman D. 1981. The framing of decisions and the rationality of choice. *Science* 211:1453–58

Tversky A, Kahneman D. 1991. Loss aversion in riskless choice. *Q. J. Econ.* 106:1039–61

Tversky A, Kahneman D. 1992. Advances in prospect theory: cumulative representation of uncertainty. *J. Risk Uncertain.* 5:297–323

Uccello C. 2000. *Do spouses coordinate their investment decisions in order to share risk?* Work. Pap. 2000-09, Cent. Retire. Res., Boston Coll.

US Dep. Labor. 2001–2002. *Private Pension Plan Bulletin, Abstract of 1998 Form 5500 Annual Reports*. Washington, DC: Pension Welf. Benefits Admin.

Wise DA. 1997. Retirement against the demographic trend: more older people living longer, working less and saving less. *Demography* 34:83–95

Yakoboski P, Silverman C. 1993. Baby boomers in retirement: What are their prospects? In *Retirement in the 21st Century. . .Ready or Not*, ed. DL Salisbury, NS Jones, pp. 13–62. Washington, DC: Empl. Benefit Res. Inst.

Zelizer VA. 1979. *Morals and Markets: The Development of Life Insurance in the United States*. New York: Columbia Univ. Press

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