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Looking to the Future

O! I could prophesy. . . .

Henry IV, Part 1

We can't even predict the next drip from a dripping tap when it gets irregular. Each drop sets up the conditions for the next, the smallest variation blows prediction apart, and the weather is unpredictable the same way, will always be unpredictable. . . . The future is disorder.

Tom Stoppard, *Arcadia*

Many Americans now look forward to retirement. Most enjoy the health and the income needed to pursue the good life. Previous generations were not as lucky. At the beginning of this century few men could afford to retire. Many of those who retired did so because of poor health or employment prospects and became dependent either on charity or on their family. Rising incomes have enabled more men to withdraw from the labor force. Now income, health, and employment prospects are not the important determinants of the retirement decision they once were. A bit of income and the relatively inexpensive amusements provided by mass tourism and mass entertainment have made retirement both common and highly valued. Will the number of years spent in retirement continue to increase, either because the trend toward earlier retirement continues or because longevity increases even further? Will we be faced with both an aging population and a population of retirees? While I cannot prophesy, I believe that the past provides insight. The demographic and economic processes that have produced an aging population and rising retirement rates have been ongoing for more than a century.

9.1 An Aging Population

The population of the United States has been aging for over a century, slowly at first, rapidly in recent times. Figure 9.1 shows that, in 1850, less than 3 percent of the population was older than sixty-four and in 1910 only 4 percent. By 1940 the figure was 7 percent and by 1990 13 percent. By 2050 the figure is projected to rise to least 20 percent.

Both increases in longevity and declines in the number of live births account for increases in the relative size of the elderly population. The effect of these two phenomena on the age distribution of the population can be seen in figures 9.2 and 9.3. These plots show that, whereas the age distribution of the popula-

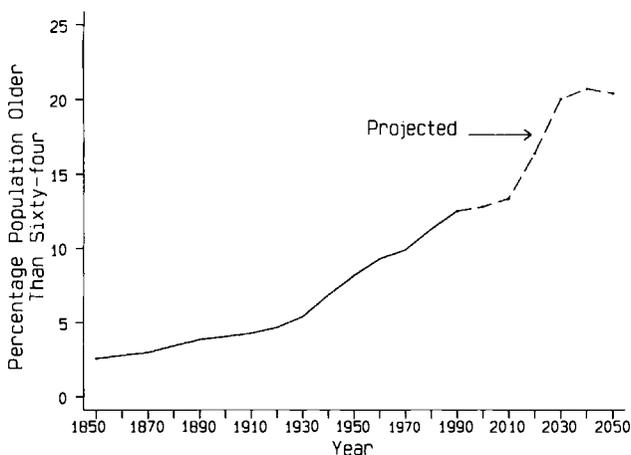


Fig. 9.1 Percentage population older than 64 (actual and projected), 1850–2050

Note: The percentage of the population older than sixty-four in 1850 was estimated from the integrated public-use census sample (Ruggles and Sobek 1995). The percentage for 1860 was interpolated. All other actual percentages are from Series A 119-134 in U.S. Bureau of the Census (1975, 15) and from table 14 in U.S. Bureau of the Census (1993, 15). The projections are from Day (1993) and are the Census Bureau's middle series.

tion could be represented by a pyramid in the nineteenth century, the base of the pyramid was narrower in 1910 and 1940. Fertility declined steadily throughout the nineteenth century and then so sharply during the 1920s and early 1930s that not enough women were born during the depression to replace the women then leaving childbearing age. By 1940 a decline in both fertility and mortality led to 7 percent of the population being older than sixty-four.

Population aging was even more pronounced after 1940, with some notable exceptions. The birthrate increased at an unprecedented rate between 1946 and 1964, reaching a peak in 1957, when more than 4.3 million babies were born. At the same time life expectancy at birth rose by almost four years, largely because of declining childhood mortality. Figure 9.3 shows that in 1970 the age distribution narrowed at young adult ages both because so few children were born in the 1930s and because the baby boom of the 1950s widened the age distribution during the teen years. Because the baby boom was followed by a baby bust, during which fertility dropped to its lowest levels in American history, the baby-boom generation has produced a “pig-in-a-python” bulge in the age distribution. Thus, in 1995 the age distribution was very narrow at young ages, bulged at ages thirty to forty-nine, and again narrowed sharply when the depression cohort reached ages fifty-five to sixty-five.

The aging of the baby-boom generation will dramatically raise the proportion of the population older than sixty-four. In 2025, when the baby-boom generation will be between ages sixty and eighty, 18 percent of the population is expected to be older than sixty-four years of age. In 2050 8 percent of the

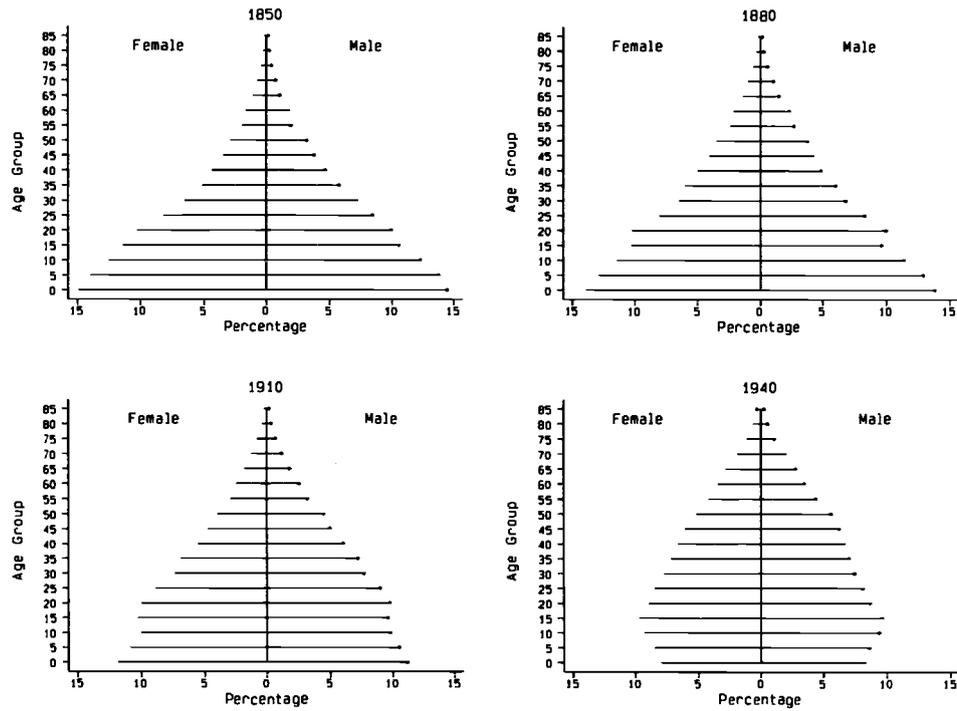


Fig. 9.2 Age distribution of the population, 1850–1940

Note: The distributions were calculated from the integrated public-use census samples (Ruggles and Sobek 1995).

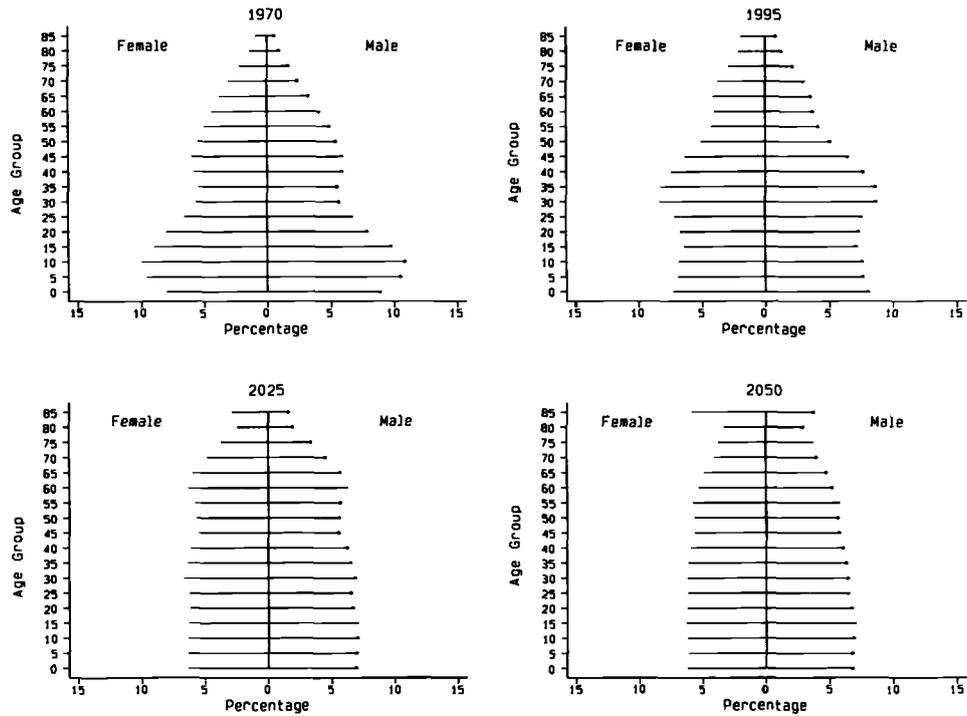


Fig. 9.3 Age distribution of the population, 1970–2050

Note: The distribution for 1970 was calculated from the integrated public-use census samples (Ruggles and Sobek 1995). The distributions for 1995, 2025, and 2050 are from Day (1993) and are the Census Bureau's middle-series projections.

population will be older than seventy-nine and 5 percent older than eighty-four.

If life expectancies increase faster than expected, the percentage of the population older than sixty-four in 2025 and in 2050 may be even greater than the 18 and 20 percent, respectively, predicted by the intermediate projections of the Census Bureau and reproduced in figure 9.3. Since 1970 about half the increases in life expectancy can be attributed to improved older-age mortality.¹ Because 80 percent of all individuals now survive to age sixty-five, any substantial improvements in future life expectancy are therefore likely to result from declining mortality above age sixty-five.

Whether future increases in life expectancy are possible depends on whether as a species we have reached a genetically programmed limit to life expectancy. Although the debate continues over whether the life span is genetically fixed, recent research suggests that it is not or that, if it is, the limit is well above the age of eighty-five, as originally postulated by Fries (1980, 1989). Vaupel (1991) has argued that children alive today may live ninety or even a hundred years on average. If there were well-defined limits on the length of the life span, then, when chronic conditions do not strike prematurely, mortality rates should accelerate rapidly at older ages. But the probability of survivorship after age eighty has increased sharply, and survivorship curves of the population aged eighty or older do not indicate an increase in age-specific mortality (Manton and Vaupel 1995). These findings suggest that, although genetics may affect vulnerability to environmental factors, absolute life spans are not necessarily rigidly determined by genetics.

Just how long are the baby boomers likely to live? Kannisto (1994) has found that the decline in older-age mortality in developing countries since 1950 has proceeded at widely varying speeds, sometimes sluggish, sometimes rapid, and that there have even been occasional short periods of mortality increases. Unfortunately, we do not yet know how to incorporate changes in socioeconomic conditions, medical technology, and the other factors that have led to mortality declines into our forecasts. One promising line of recent research is to use knowledge of early life conditions to better inform our predictions. Studies of Britain, France, and Italy conclude that the mortality experience of a cohort is largely determined by the first fifteen years of life, with improvements in adult mortality following mortality declines in the first fifteen years of life, while declines in infant mortality lagged behind until maternal health improved (Caselli and Capocaccia 1989; Kermack, McKendrick, and McKinlay 1934a, 1934b; Preston and van de Walle 1978). Buck and Simpson (1982) found a high correlation in the United States between diarrheal deaths from birth to age twenty in 1917–21 and death rates from arteriosclerotic heart disease at ages forty to forty-four and fifty to fifty-four. Many of the degenerative conditions of old age, such as coronary heart disease, hypertension, stroke, non-insulin-dependent diabetes, and autoimmune thyroiditis, have been linked to exposure to infectious disease, malnutrition, and other types of biomedical and socioeconomic stress early in life (Barker 1992, 1994). In their review of the literature on early life conditions and older-age mortality, Elo and Preston

(1992, 204) concluded, "Results from many empirical studies support the notion that childhood conditions play a major role in adult mortality."

Relative to their predecessors, the baby boomers have, indeed, been fortunate. Between 1920 and 1950 mortality rates from birth until age five fell sharply. Whereas only 83 percent of individuals reached age five in 1920, by 1950 97 percent did. The four-centimeter increase in adult height for cohorts born between 1920 and 1950, documented in this book, also implies that early life conditions improved. The baby boomers were the first generation born in the age of antibiotics, when it became possible to cure the infectious diseases of infancy and early childhood before they led to large reductions in the rate of growth or damaged developing organs. The early baby boomers have not yet reached age sixty-five. They will not begin to reach age ninety until 2035. As pointed out by Preston (1993), those who would reach ninety in 1996 were born in 1906, when life expectancy at birth was only fifty years, one of twelve children did not survive infancy, and the burden of infectious diseases was exceptionally heavy. Nonetheless, they were born at a time when life expectancy at birth had improved. In fact, improvements in the disease environment that resulted in the development of better physiques and less scarring by the sequelae of infectious disease may explain the increase in the size of the "old-old" population since the 1970s. The marked improvement in early life conditions between 1920 and 1950 suggests that the life expectancies of the elderly will increase rapidly at least twenty years into the future and that the increase may be more rapid than that observed over the last twenty years. Census and Social Security Bureau projections of the size of the elderly population, projections that are based on recent mortality declines, are therefore likely to be off the mark.

9.2 A Retired Population

When the baby boomers begin to retire in 2010, the strain on the Social Security retirement system, even under the Social Security Board's intermediate projections, is expected to be substantial. The number of beneficiaries is expected to increase much more rapidly than the number of covered workers. Under the intermediate projections of the Social Security Board of Trustees, trust funds for Old Age and Survivors Insurance and for Disability Insurance will be depleted in 2029. Financing the Social Security retirement and disability program with incoming tax revenues alone implies that the combined employer-employee tax rate plus income taxes on benefits would have to rise to 17 percent of taxable payroll from 13 percent today. After 2029, taxes would have to be even higher (Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Trust Funds 1996). If, as is likely, the baby boomers' life expectancies exceed those assumed by the intermediate projections of the Social Security Board, the strain on the Social Security retirement system will be even greater.

Another major transfer program affecting the elderly is Medicare, providing

coverage to virtually all those age sixty-five or older (Congressional Budget Office 1993). Like Social Security and Disability Insurance, Medicare is not adequately financed either, and depletion of Medicare funds is expected by the year 2001 (Board of Trustees of the Federal Hospital Insurance Trust Fund 1996). Assuming that the deficit is met by increasing taxes, expected increases in the size of the elderly population under the intermediate projects of the Hospital Insurance Board of Trustees imply that outlays on federal Hospital Insurance alone will consume 3 percent of GDP by 2020 and 4½ percent by 2050, up sharply from the 1½ percent consumed today (Board of Trustees of the Federal Hospital Insurance Trust Fund 1996). Of particular concern are increases in the size of the oldest-old population. Those eighty-five years of age or older are almost twice as likely as those aged sixty-five to seventy-four to enter a short-stay hospital, and their stays there are 11 percent longer. They are almost four times as likely to enter a skilled nursing facility, and their stays there are 18 percent longer. Total Medicare program payments to those older than eighty-four are 60 percent higher.²

The crisis in Social Security is likely to be deeper than predicted by the intermediate projections of the Social Security Board. The American population has been growing healthier since the end of the nineteenth century. Men are no longer dangerously thin, and they no longer face the childhood disease and poor nutrition that may stunt their growth. This book has shown that chronic disease rates among the elderly have declined across a century. Disability rates among the elderly have also declined recently (Manton, Corder, and Stallard 1993). Trends in adult height and early life conditions suggest that the baby boomers will enjoy a particularly healthy and long-lived old age. But we cannot expect that, because the baby boomers will enjoy better health in their old age compared to past generations, health care costs will fall. Kim (1996) finds that the improvement in health will not be large enough completely to relieve the health care burden caused by an elderly population that will be larger both in terms of absolute numbers and as a proportion of the population. Innovations in medical technology combined with rising incomes may produce further increases in the demand for medical care.

Ballooning pension and health care costs have led to a shift in government policy from the promotion of retirement to the promotion of elderly labor force participation. By increasing the labor supply of the elderly, the government could raise tax revenue that could help finance Social Security pension and health care costs. Most of the members of the 1994–95 Technical Panel on Trends and Issues in Retirement Savings of the Social Security Advisory Council favored further increases in the age at which full benefits are to be received and agreed that the age should eventually be indexed to life expectancy. Most panel members also believed that the early entitlement age for Social Security benefits should be raised as well from sixty-two to sixty-four or sixty-five. In addition to cutting benefits by increasing entitlement ages, many policy makers have proposed abolishing the earnings test, whereby Social Security benefits are reduced for each dollar in excess of the earnings threshold.

How will the baby boomers fare if Social Security benefits are reduced? The proposed changes to the Social Security system would give households enough time to increase their savings rate to maintain their retirement income. The higher working income of baby boomers relative to that of their parents might foreshadow a higher private retirement income. Baby boomers have both significantly higher real incomes and greater accumulated wealth than their parents did at comparable ages (Cantor and Yuengert 1994; Congressional Budget Office 1993; Easterlin, Schaeffer, and Macunovich 1993), but baby-boomer households are not saving enough to maintain their current living standard into retirement (Bernheim and Scholz 1993). The problem is particularly acute for lower-income households. These are households that might well expect Social Security to replace their income adequately. Because the Social Security benefits of low-income households are not taxed, an individual who has had average earnings during his entire working life and who retires at age sixty-five with a dependent spouse now receives benefits that replace more than 80 percent of peak preretirement net-of-tax income (Feldstein 1996). These are the households that are most likely to be affected if Social Security benefits are reduced, not the well-to-do, much of whose retirement is financed by private pension plans.

Will this tinkering with the Social Security system be enough to slow down or reverse the trend toward earlier retirement? The threshold above which Social Security benefits are reduced for every dollar in earnings is already so high that it does not affect the participation decision (Friedberg 1996). Under currently legislated changes, workers will still be able to collect actuarially reduced benefits at age sixty-two. Even if the early retirement age is raised, workers will still be able to apply for Social Security disability benefits and to receive these benefits without having to accept any actuarial reduction in retirement benefits. Krueger and Pischke (1992) found that, when a legislative change substantially and unexpectedly reduced benefits to individuals who were born after 1916, a change that led to a worker who retired at age sixty-five after a career of earning the average wage to receive Social Security benefits that were 13 percent lower than if he had been born in 1916, this reduction had very little effect on retirement trends. This book has shown that, over time, income has exerted less and less of an effect on the retirement decision. If this insensitivity to income arises from social norms, perhaps established by Social Security, then a reversal is certainly possible. But I have shown that this insensitivity arises in part from the relatively high wealth levels of today's retirees and the affordability of mass tourism and mass entertainment, both of which enable the elderly to pursue the good life. If incomes continue to rise, and if leisure-time activities continue to be relatively inexpensive and enticing, then the rise of retirement is unlikely to reverse.

Nor is the rise of retirement likely to reverse because of the improving health of the elderly. Retirement rates have been rising in spite of improving health, and health is becoming less and less important to the retirement decision. A temporary reversal is possible if, in the tight labor markets likely to prevail

when the baby-bust generation reaches prime working ages, jobs become available that not only are part-time but also permit time off for extended periods of travel. A reversal is also possible if the early age of retirement for Social Security were changed unexpectedly or if benefits were sharply and unexpectedly reduced so that households who depend primarily on Social Security for their retirement income found themselves facing a shortfall in savings. These households would either have to postpone retirement and extend their working life, accept transfers from their children, or experience a large decline in retirement consumption.

Rather than postpone retirement when faced with unexpected benefit cuts, the elderly may choose to reduce their consumption. In the case of men who involuntarily retired sooner than expected, Hausman and Paquette (1987) observed declines in consumption. The elderly could reduce their consumption by living with their children. But I showed that the effect of changes in income on the coresidence decision has become smaller since the turn of the century. Independent living may be not only relatively inexpensive but also much more highly valued than it was in the past. Migration may permit the elderly to cope with income declines while still maintaining their standard of living. Improvements in transport have made the elderly more mobile than they were in the past. Graves and Knapp (1988) argue that, because the elderly have incomes that are independent of their residential locations, they move where the value of amenities, such as climate, is reflected in labor rather than in land markets. By forming communities at the fringes of such areas the elderly rapidly gain the political clout to use tax monies for the purchase of the goods that they want, substituting senior centers and golf courses for playgrounds and public schools. They can thus both lower the price of recreation and increase the variety of recreational goods. In fact, as this book points out, both the increased public provision of recreational facilities and technological change have made income a less important component of recreation and retirement extremely attractive. Even the elderly with low incomes who cannot afford mass tourism can afford mass entertainment such as television. Provided that the elderly have enough income to live independently of their children and to enjoy low-cost recreational activities, they are likely to feel more time rather than income constrained. Under these circumstances a reversal in retirement rates is unlikely.

Notes

1. In 1970 life expectancy was seventy-one at birth and fifteen at age sixty-five. In 1991 the respective life expectancies were seventy-six and seventeen (National Center for Health Statistics 1995).

2. See tables 14, 25, and 37 in *Health Care Financing Review: Medicare and Medicaid Statistical Supplement* (1996).