

POPULATION AGING AND SOCIAL POLICY

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Abstract

As the life course currently is structured, old age is socially defined as a stage of life beginning in the early sixties, in which retirement from work and many other social responsibilities is expected. Few incentives exist for older persons to make productive contributions to the society, and obstacles to their engagement in productive activities exist. Consequently, large transfers from the working population to the retired are required, and potential contributions of the elderly to societal well-being are lost. Further, adult children often face a long period of being responsible for their aging dependent parents. Changes occurring in the older population challenge this existing arrangement. Not only is the ratio of the older to younger adults increasing, but also an increasing proportion of adults entering old age have the ability to make significant contributions (i.e. they are well educated, healthy, economically secure, and politically astute). Concern over this growing mismatch between older people's abilities and the roles they are expected to fill leads to a discussion of social policy. How might social policy increase the productivity of the elderly and/or reduce the burden of supporting a growing dependent older population. Three major categories of policies responsive to this question are considered. The outcome of these policy debates will significantly shape the future of aging in the United States.

INTRODUCTION

Aging of populations is a pervasive phenomenon across all developed countries in the late twentieth century and is expected to continue into the twenty-first century. The proportion of people who are old in populations of developed countries, currently at an unprecedentedly high level, is projected to grow even larger in the future. Reasons for population aging, from a demographic perspective, are not particularly complicated. The age structure of a population is completely determined by past fertility, mortality, and migration patterns. The social, economic, and political implications of population aging, on the other hand, are both complex and subject to debate. This chapter reviews changes occurring in the size and composition of the older population and the social policy debates being generated by these changes.

This review is divided into three parts. First is an overview of how and why the older population is changing in size and composition relative to the non-old population. The changes noted in the first section, produced by past social changes, challenge the existing social structure. Several of these challenges are considered in the second section. Finally, three categories of social policies responsive to challenges of population aging are identified and a variety of policies within these categories discussed.

THE SOCIAL DEMOGRAPHY OF AGING

Significant population aging in the first half of the twentieth century occurred only in Europe, North America, and Oceania—the regions of the world where sustained fertility decline began. By 1950, in Sweden, where population aging had advanced the furthest, 10% of the population was over age 65. Between 1950 and 1990, the populations of developed countries continued to grow older, so that by the latter date, more than 12% of the population in Europe and North America was classified as old (Table 1). Other regions of the world, except Africa where fertility was not declining, began to experience population aging during this time interval. Looking ahead, population aging is expected over the next several decades in all regions of the world. United Nations (1988) projections show that the elderly will comprise more than a fifth of the population in countries that have the lowest fertility and mortality rates (e.g. Japan and Sweden), a proportion unprecedented in world history. The transformation of age structures now occurring throughout the world is linked closely to this demographic transition.

Demographic Causes of Population Aging

Stable population theory is a useful analytic tool for demonstrating effects of fertility and mortality rates upon the age structure of a population. Classic

Table 1 Proportion over age 65 and percent change in proportion old in populations of selected areas of the world: 1950–2025. Source: UN 1988)

	Percentage Over 65			Percentage Change in Old	
	1950	1990	2025	1950–90	1900–2025
World	5.1	6.2	9.7	22	56
More developed countries	7.6	11.7	17.4	54	49
Less developed countries	3.9	4.5	8.2	15	82
Africa	3.6	3.0	3.9	–16	30
Latin America	3.3	4.7	8.3	42	77
North America	8.1	12.1	17.4	49	44
Asia	4.1	5.0	10.0	22	100
Europe	8.7	13.1	18.4	51	40
Oceania	7.5	9.0	13.1	20	46
USSR	6.1	9.4	14.8	54	57
Japan	4.9	11.4	20.3	133	78
Sweden	10.3	17.7	22.2	72	25
USA	8.1	12.2	17.2	51	41

articles by Lotka (1922) and Dublin & Lotka (1925) show that any population, closed to migration and experiencing unchanging age-specific fertility and mortality rates over time, eventually achieves a fixed age distribution and a constant rate of growth. A population with unchanging vital rates and a fixed age distribution is called a stable population. By comparing several stable populations with differing fertility and mortality schedules, one can see how the age structure of a population changes as it moves from one equilibrium state to another (Coale 1972). The results of this exercise are revealing and provide a starting place for discussing the demographic determinants of population aging.

The proportions over age 65 in stable populations with various combinations of gross reproduction rates¹ (GRR) and life expectancies \bar{e}_0 are shown in Table 2. In a high fertility (GRR = 4) and high mortality $\bar{e}_0 = 30$) stable population, less than 2% of the population is elderly. In contrast, a low fertility (GRR = 0.8) and low mortality $\bar{e}_0 = 80$) population has 26% over age 65. Reading across any row of Table 2 shows the effects of decreasing mortality on population aging when fertility is held constant, while reading down any column shows the effects of decreasing fertility when mortality is

¹The gross reproduction rate may be interpreted as the average number of daughters that a cohort of females would have over its reproductive life if it experienced a given age-specific fertility schedule and no mortality.

Table 2 Percent over age 65 in stable populations with various combinations of fertility and mortality. (Source: Coale and Demeny 1983)

Gross Reproduction Rate	Expectation of Life (in years)					
	30	40	50	60	70	80
4.0	1.8	1.8	1.7	1.7	1.7	2.1
3.0	3.1	3.0	3.0	2.9	3.0	3.6
2.0	5.8	5.9	5.9	5.9	6.1	7.5
1.0	14.5	14.9	15.5	15.7	16.5	20.2
0.8	17.8	18.9	19.7	20.1	21.2	25.9

held constant. Several general principles regarding population aging are illustrated by data in this table. (i) Decreasing fertility always leads to population aging. (ii) Decreasing mortality from high to moderate levels leads to population “younging” when fertility is high. (iii) Decreasing mortality from moderate to low levels produces population aging. (iv) Fertility change has a much greater impact than mortality change upon an age structure. These conclusions help, in a crude way, to explain the pattern observed in Table 1. Populations with high fertility rates in recent years (e.g. those in Africa) have relatively few older persons, while those with a long history of low fertility (e.g. countries in Europe) have relatively large proportions of the old. Further, countries that have had generally declining fertility over the twentieth century (all developed countries) have experienced considerable population aging.

The Future of US Population Aging

Barring unexpected major demographic changes in the future, the US population will age slowly between 1990 and 2010 and then rapidly during the two decades following 2010. This is anticipated, of course, because the cohorts entering old age over this time interval vary in size. Up until 2010, the relatively small Depression-era birth cohorts will be reaching age 65. After 2010, the large post–World War II baby-boom cohorts will enter old age. The middle-level population projections made by the US Bureau of the Census (1989) predict that the proportion of the population over age 65 would grow from 12.6% to 13.9% between 1990 and 2010 and then balloon to 21.8% by 2030. The assertion that 22% of the US population will be old by the time the baby boom has entered old age is based upon this projection, and it understandably generates a good deal of interest. This figure is nearly twice the proportion currently old in the United States and significantly exceeds the experience of any part of the country heretofore. The state with the oldest population, Florida, had only 18% over age 65 in 1990.

Although those who will reach old age through the middle of the twenty-first century have already been born, the future path of population aging is not

as clear as it might seem. To assert confidently that 22% will be old in 2030 indicates a failure to appreciate the inexactness of population forecasting. In 1971, the Census Bureau's middle-level projection for the proportion over age 65 in 2020 was 10.8%; in 1988 (just 17 years later), the projection was 17.7%. Both projections are mathematically correct, but they arrive at remarkably different conclusions because of changes in the conventional wisdom about future fertility and mortality trends. By 1988, it seemed reasonable to assume much lower fertility and much greater decline of mortality in the future than was assumed in 1971. The poor track record of population forecasting should undermine confidence that the expectations of demographers around 1990 will be realized over the next 40 years.

In addition to a projection based upon the middle assumptions, the 1988 Census Bureau population projections include a range of alternative scenarios. Each alternative scenario is based on a different combination of plausible assumptions regarding the future course of fertility, mortality, and migration. As noted above, assuming a middle value for each demographic variable produces the widely quoted projection that 21.8% of the population will be over age 65 in 2030. But if the lowest value on each variable should occur, 28.7% will be old. On the other hand, the highest value on each variable produces a population with 17.4% old. Looking at the results of these alternative plausible scenarios of future population aging leads to three observations. First, each projection indicates a substantial increase in proportion old in the future. Second, the range of plausible outcomes is wide—the high figure is 65% greater than the low figures. The social, economic, and political implications of 17.4% versus 28.7% are surely quite different. Third, we cannot be confident that the actual proportion of elderly in the population will fall within this wide range. This last observation needs further elaboration.

What happens if the age of mortality among the elderly rises more rapidly than the most optimistic assumption made in the Census Bureau projections? Siegel & Taeuber (1986) show that continued rapid declines in age-specific death rates, in conjunction with low fertility and low immigration, could produce a population in the year 2050 with 36% over age 65. At the other extreme, if mortality declines are modest and fertility returns to its mid-1960s level, as few as 13% of the population would be old (Uhlenberg 1988a). Admittedly, the extremes of 13% and 36% are both unlikely future outcomes. Yet substantial uncertainty regarding the actual age distribution in 2030 does exist.

Composition of the Older Population

Population aging no doubt has important implications for social change, but standing alone it fails to capture the full dynamic of the aging process. Not only does the size of the older population relative to the non-old population

change over time, the individuals comprising the older population also change. The cohort life-course framework provides a simple and general organizing schema for studying change in the composition of the elderly. The seminal work in using cohort analysis to study social change is Ryder's (1964; 1965), and significant contributions that add a life-course perspective come from Elder (1975) and Riley et al (1988). Crucial concepts in this framework for studying changes in the older population deal with "cohort flow" and "cohort succession".

As a birth cohort ages through historical time, it flows across the various phases of the life-course. By the time a cohort arrives at the threshold of old age, it has been distinctively marked by experiences occurring over its earlier life. It has lost some members due to death and out-migration, and has gained new members by in-migration. Further, it has been shaped by the social structure and historical events that its members encountered as they occupied earlier phases of the life-course. Thus, the older population continuously changes as newcomers arrive with backgrounds that differ from those who arrived earlier. Change also occurs because of the selective loss of previous members of the older population due to death. The rate of turnover in the older population tends to be quite high because mortality rates at the older ages are high. In 1990, for example, 58% of the 32 million older people in the United States had entered old age within the past 10 years. When there is significant intercohort differentiation, as there has been in recent history, this process of cohort succession leads to rapid changes in the composition of the older population.

The range of characteristics (social, economic, psychological) that are potentially interesting and significant for understanding how the older population is changing over time is vast. Unfortunately, adequate empirical data to allow tracing historical change and projecting future change are limited. Several variables for which data exist are examined below, but clearly these are not the only areas in which change is occurring. In discussing these changes, attention is given to the past social changes that produced intercohort differentiation.

FERTILITY Significant fertility declines over the twentieth century are, as noted above, the primary cause of the aging of the American population. And the expected persistence of low fertility in the future is the basic reason for anticipating a continual aging of the population through the first third of the twenty-first century. There are, however, several other aspects of fertility patterns that affect the composition of the older population. Differential fertility across racial and ethnic groups and changes in the parity distribution of women merit special attention.

Black and Hispanic women in the United States have significantly higher

birth rates than white women. In 1988, for example, the black fertility rate exceeded the white rate by 37%, while the Hispanic fertility rate exceeded the white rate by 53% (NCHS 1990). Reflecting these longstanding fertility differentials, the black and Hispanic populations are younger than the non-Hispanic white population. Thus non-Hispanic whites comprise a larger proportion of the older population than of the non-old population. In 1988, non-Hispanic whites made up 88% of the elderly, but only 72% of the population under age 18. Projections to 2030 show the proportion of elderly who are non-Hispanic white declining to 76%, but by that date only 59% of the children in the United States are expected to be non-Hispanic white (Uhlenberg 1988a). The higher concentration of racial and ethnic minorities in the younger ages than in the older ages will persist as long as non-Hispanic whites have lower fertility rates.

Since adult children frequently are viewed as the primary caregivers of the dependent elderly, it is surprising that little attention has been given to the number of surviving children that older persons have (Uhlenberg & Cooney 1990). The distribution of older persons by number of living children is determined by their past parity distributions and by survival rates of their children. Preston (forthcoming) has made projections for several cohorts for the time period at which they will be aged 85–89, i.e. at a stage of life when dependency is quite likely. Among women aged 85–89 in 1990, 25% had no surviving child and 26% had just one. In 2015, however, the situation will be quite different as the mothers of the baby boom occupy the oldest-old category. In that year, it is expected that 13% will have no child and 18% will have only one. The proportion of older women with two or more living children will decline in the more distant future, however, as women bearing children in the 1970s and 1980s enter the latest years of life.

MORTALITY The large mortality declines occurring in the first half of the twentieth century were concentrated in the younger ages, resulting in a younger population age distribution than there would have been in the absence of a mortality decline. More recently, however, the greatest relative growth in life expectancy has occurred at the oldest ages (McGill 1988). This decline of death rates at the older ages, along with a decline in the relative size of successive cohorts entering old age, is producing an aging of the older population. That is, the proportion of the older population that is over age 80 or 85 is increasing (Myers 1990). For example, between 1930 and 1990 the proportion of the elderly who were over age 85 increased from 4.1% to 10.3%. The relative growth of the oldest-old category will continue until it reaches 15.5% in 2010, after which it will decline as the large baby boom cohorts begin to enter old age. Twenty years later the oldest-old category will again grow rapidly as the baby boom advances into the terminal age category.

Neugarten (1974) was the first to call attention to the significance of the age heterogeneity of the older population. More recently, largely in response to a research funding initiative by the National Institute on Aging, the oldest-old have received considerable attention (Suzman & Riley 1985, Suzman & Willis—forthcoming, Rosenwaike & Logue 1985, Rosenwaike & Dolinsky 1987, Longino 1988).

A second important aspect of mortality patterns affecting the composition of the older population is the gender differential. The sex ratio (males per 100 females) is about 105 at birth, but this ratio then declines continuously as a cohort ages owing to higher mortality rates for males at every age. Among cohorts occupying the early stage of old age (65–69) the sex ratio currently is 80, while among those over age 85 it is only 44. Despite continuing research on causes of gender differences in mortality (Ory & Riley 1989), it is unclear what future trends will be. The survival advantage of females over males increased over most of this century but has declined slightly in more recent years. The future sex composition of the older population will be determined by the relative size of the various cohorts in old age (an aging of the older population implies a greater proportion of females) and the size of the gender differential in mortality (a convergence of rates would lead to a more balanced sex ratio).

A third factor related to declining mortality concerns the prevalence of disease and disability among the elderly. The relationship between declining mortality and health status of the elderly is debated, and adequate data to assess changes over the recent past do not exist. Health status might be improving if declining mortality reflects medical and lifestyle changes which reduce the prevalence of disease or lessen the disabling effects of chronic disease (Ycas 1987, Manton 1989a, 1990). But if lives are prolonged among those who are disabled and chronically ill, then the proportion of the elderly experiencing active and independent living may decrease (Crimmins & Prammaggiore 1988, Gruenberg 1977, Verbrugge 1984). It is clear, of course, that rates of disability increase rapidly as cohorts move into the later stages of old age. While 15% of those aged 65–69 need help with activities of daily living, about half of those over age 85 need assistance (Soldo & Agree 1988). Unless significant progress is made in reducing disabilities associated with arthritis, skeletal problems, visual disorders, Alzheimer's disease, diabetes, and other slow degenerative diseases, the increase of the oldest-old implies a growing proportion of the elderly with disabling medical conditions.

MIGRATION The variable flow of immigrants to the United States over the twentieth century has differentiated the nativity status distribution of cohorts entering old age. Because of the large waves of immigrants around the turn of the century, over 25% of those entering old age in the 1930s were foreign-

born (Uhlenberg 1977). By 1980, reflecting the low level of immigration in the 1930s and 1940s, only 6% of those reaching age 65 were foreign-born. Increases in immigration in more recent decades will produce future growth in the proportion of foreign-born among the elderly, but not up to the levels occurring in the first half of this century. The significance of nativity status in later life has not been examined carefully. Nevertheless, one might speculate that the foreign-born approaching old age tend to be disadvantaged in relating to the complex bureaucratic structures of a modern society.

EDUCATION Over the first half of the twentieth century, the public educational system was expanding, and each successive cohort moving through the system surpassed all preceding cohorts in years of schooling completed. As a result, the educational gap between the old and the young in American society grew quite large. In 1970, for example, 79% of the population aged 20–24 had graduated from high school, compared to only 24% of those over age 65. Since about 1970, however, the educational attainment of successive cohorts entering young adulthood has stopped increasing. Consequently, the educational disadvantage of the elderly is declining, and by 2020 those entering old age are likely to have as much formal education as the younger adults in the population.

WORK Two significant changes in the organization of work have consequences for the elderly: the growth of retirement, and the increase in female labor force participation. A voluminous literature treats reasons for and implications of the institutionalization of retirement (Graebner 1980, Quinn & Burkhauser 1990). While there is debate about how large the change in labor force participation of older males was in the early twentieth century (Ransom & Sutch 1989, Moen 1987), a rapid increase in retirement rates after 1940 is well-documented (Tuma & Sandefur 1988). Among women, increasing retirement of the elderly in recent decades essentially has canceled the effect of increasing female labor force participation generally, so there has been little change in the proportion of older women who are working. By 1990, participation in the labor force was an important activity for relatively few men or women after age 65, and retirement was an integral part of the social definition of old age.

The past work experience of currently older women differs markedly from that older men. Older women are more likely either not to have participated in the labor force, or to have erratic and noncontinuous work histories. Further, those with work histories are more likely to have held low-paying jobs with few fringe benefits (O’Rand 1988). This gender difference in labor force experiences is an important reason for the lower economic status of women than men in later life. But work experiences of women and men are growing

more similar as cohorts of women reaching young adulthood since 1970 have increasingly pursued work careers. When these cohorts enter old age in the future, the gender gap in economic status may diminish.

WELFARE STATE Despite decreasing labor force participation rates, the economic status of the elderly improved greatly between 1950 and the late 1980s (Ross et al 1987, Smeeding 1990). Between 1959 and 1987, the image of the elderly as an economically disadvantaged segment of the population increasingly became obsolete as the proportion of the elderly with incomes below the poverty line dropped from 35% to 12%. As Duncan & Smith write, "there appears to be little doubt that the economic status of the typical elderly person, when measured in a fairly comprehensive way, probably meets or exceeds that of the typical non-elderly person in the 1980s." (1989:264) Behind this dramatic improvement in the economic status of the elderly has been the expansion of the welfare state. The introduction of Medicare in 1965 and changes in the Social Security Programs since 1950 especially have been significant. Coverage under Social Security expanded to include most of the labor force, and benefits increased to a level that provides considerable income security in later life (Myles 1988). The economic status of the elderly could change in the future, but there is general consensus that cohorts entering old age over the next several decades should fare well (McGill 1988, Duncan & Smith 1989, Smeeding 1990).

WARS AND DEPRESSIONS Various cohorts of American men and women have been differentially affected by the wars and depressions occurring in the twentieth century. Each cohort occupies a unique life-course position at the time of a major historical event, and its future is shaped to some extent by this experience. Elder (1974, 1988) has elucidated some lingering consequences for specific cohorts that encountered the Great Depression and World War II during particular phases of their life courses. Vinovskis (1986) has studied Civil War veterans, while Laufer & Gallops (1985) have traced effects of the Vietnam War upon combatants. In addition to any psychological and social effects of military service (especially combat), the status of veterans also provides special entitlements for pensions and health care in old age. The proportion of men serving in the armed forces grew from 27% of the 1910 cohort (which reached age 65 in 1975) to 78% of the 1927 cohort, the cohort most affected by World War II mobilization (Winsborough 1978). Veterans of the Korean, Vietnam, and Persian Gulf conflicts will arrive at old age in the future. One can also trace out the variable impact of the Great Depression upon cohorts born before 1940.

MARRIAGE AND DIVORCE The marital status of cohorts entering old age is determined by marital formation and dissolution experiences which occurred

earlier in the life course. Over this century, the proportion of men and women who never marry has not fluctuated widely, averaging about 6% among those who survive to old age. However, the other relevant variables determining marital status in old age have changed dramatically. As a consequence of decreasing mortality rates and increasing divorce rates, a smaller proportion of each cohort arrives at old age having ever experienced widowhood, while an increasing proportion has experienced an earlier divorce. Throughout this century, a majority of individuals with disrupted marriages in the young adult years due to divorce or widowhood have remarried, although age-specific remarriage rates have changed over time. Up until about 1965, remarriage rates were increasing; since then they have declined rapidly. Remarriage rates in 1985 were only half as large as they were in 1965 (Uhlenberg et al 1990). These changes in mortality, divorce, and remarriage have combined to produce a remarkable change in the marital status characteristics of cohorts entering old age.

At the beginning of the twentieth century, among those aged 55–64, widowed men outnumbered divorced men by more than 20 to 1 (Uhlenberg 1990). The demographic changes described above resulted in the divorced surpassing the widowed in this age category in the 1970s, and by 2000 it is projected that the ratio of divorced to widowed will be 3.7 to 1. Because males experience higher death rates and higher remarriage rates than do females, the number of widows greatly exceeds the number of widowers at every age. Nevertheless, over time women have followed the same general pattern of sharply falling rates of widowhood and increasing rates of divorce. In 1900, there were about 67 widows for each divorcee in the age category 55–64; by 2000, it is expected that divorcees will substantially outnumber widows. If recent patterns persist, it will be cohorts born after 1960 that experience the full impact of high divorce rates and low remarriage rates over their entire adult life course. Thus a continuing increase in the prevalence of divorced persons among those reaching old age through the first several decades of the next century can be anticipated.

Summary: 12 Statements About the Aging Population

Social and demographic changes occurring over the twentieth century are producing rapid changes in the size and composition of the older population toward the end of this century. The preceding discussion leads to the following conclusions:

- (i) The proportion old in the population, which tripled between 1900 and 1990, is expected to continue to increase until 2030 when about 22% of the US population is projected to be over age 65.
- (ii) Minorities and ethnics will comprise an increasing proportion of the older population, but a much larger proportion of the young than the old population will continue to be black or Hispanic.

- (iii) For some time, the proportion of the elderly who have zero or only one surviving adult child will decline, but this trend will be reversed when the baby boom enters old age.
- (iv) The proportion of the older population classified as the "oldest-old" is growing and will continue to grow, except for a temporary reversal when the baby boom is entering old age.
- (v) Females have increasingly outnumbered males in old age, especially within the oldest-old segment.
- (vi) The foreign-born proportion of the elderly has fallen dramatically and, despite some future increase, is not expected to return to levels common in the early twentieth century.
- (vii) The educational status of the elderly is increasing rapidly, and the gap in educational attainment between the old and young may disappear by the middle of the twenty-first century.
- (viii) Retirement has become institutionalized, and relatively few men and women are significantly engaged in the labor force past age 65.
- (ix) The sharp contrast in work histories of older men and women, common up to the present, will diminish in the twenty-first century.
- (x) Poverty rates among the elderly have declined sharply since 1950 and are now similar to those of the total population.
- (xi) The proportion of the elderly who are veterans fluctuates considerably over time, reflecting the irregular occurrence of wars.
- (xii) The number of older divorced persons will continue to increase rapidly through the early portion of the twenty-first century.

CHALLENGES OF POPULATION AGING TO THE SOCIAL STRUCTURE

During any period of history, the position of the elderly in the larger society is shaped both by the composition of the older population and by the structure of the major social institutions (familial, economic, political, religious, etc). Thus far the focus has been on changes in the older population. But the social structure also changes over time. Over the twentieth century, two closely related structural changes in American society have been especially critical in transforming the meaning of old age. One change is the institutionalization of retirement; the other is the expansion of the welfare state. These two developments have been discussed at length by others (Graebner 1980, Kohli 1988, Myles 1988, Quadagno 1988) and are not addressed here. Rather, I note two outcomes of these changes that interact significantly with population aging to create new challenges to the society. First, increasingly, the elderly have become dependent upon the state for economic support. Second, the principal activity of old age has become identified as leisure.

The changing size and characteristics of the older population, in combination with the social definition of old age as a time for retirement and leisure, have stimulated a discussion about the future of aging. To what extent is there a lack of "fit" between the older population and the structure of old age? Four specific challenges created by a poor match between the aging population and the social definition of old age are noted briefly in this section. By identifying

these concerns or perceived challenges, I do not suggest that each one is accurate. Rather, these concerns are noted because they are the linkage between population aging and debates over aging policy. Policy debates generated by these perceived challenges of population aging are considered in the following section.

Economic Commitment

With the spread of retirement and development of the welfare state, the role of the state in managing a transfer of income from younger (working age) adults to older (retired) adults expanded rapidly. Prior to 1940, the federal government was not involved in supporting the elderly via social security and Medicare. As recently as 1960, Medicare did not exist and outlays for the Old Age and Survivors Insurance (OASI) program comprised only 12.6% of the federal budget and 2.3% of the GNP. By 1990, however, Medicare and OASI expenditures captured 27.7% of the federal budget and 6.4% of the country's GNP (Office of Management and Budget, 1991). As the population continues to age, with the elderly politically entitled to relatively high levels of economic support from government programs, the unwelcome issue of how to meet the growing economic commitment of supporting the dependent older population cannot be avoided. While the entitlement of the elderly to support may be justified because of their past transfers to the cohorts of elderly who preceded them, it is also obvious that taxes on the working population to support the aged have increased sharply in recent decades. Support of the elderly is a political issue—to what extent and by what means will money be transferred from the working population to the retired elderly?

Generational Equity

As the American economy expanded after World War II, the economic status of all age groups in the population improved from 1940 through 1969 (Smolensky et al 1988). After 1969, the economic status of the elderly continued to improve, but the economic plight of American children deteriorated. In 1969, 25% of the elderly were living in households with incomes below the official poverty line, compared to 14% of the children (population under age 18). By 1984, the relative position of young and old was reversed, with 12% of the old and 21% of the children living in poverty (Committee on Ways and Means 1989). These divergent trends in the well-being of the young and old dependents in American society were sharply focused in an article by Preston in 1984, and subsequently a great deal has been written on the issue of generational equity (Asahi Shimbun Publishing 1988, Duncan & Smith 1989, Johnson et al 1989, Kingson et al 1986, Palmer & Sawhill 1988).

It clearly is too simplistic to argue that increasing poverty among children is

caused by the improved economic position of the elderly. The deteriorating economic plight of children is most closely related to the increasing number of children who do not benefit from the contributions of a father. Nevertheless, the argument that adequate investment in American youth is impeded by the high cost of supporting the elderly has many supporters. They note that since OASI and Medicare are not means-tested programs, a large portion of the expenditures in these programs goes to affluent, politically powerful, older persons. No parallel income and health programs exist for children. While one may deplore encouraging competition between supporters of the young and supporters of the old for scarce resources, the issue of generational equity is a persistent topic of public debate.

Caregiving Burden

Demographic change over the twentieth century has interesting implications for relationships between adults and their elderly parents. In particular, the number of adult years one can expect to live while an aging parent is still alive has increased dramatically. Now a woman should anticipate spending more years as the child of an elderly parent than as the mother of children under age 18 (Watkins et al 1987). While the expanding welfare state has reduced the obligations of adult children to provide direct economic support for their aging parents, it has not freed children from caregiving obligations. Adult children continue to assume responsibility for caring for impaired older parents, keeping them outside of institutions as long as possible. This caregiving role frequently lasts a long time and has significant consequences for the caregiver. Thus, as Brody (1985) notes, we have arrived at a situation where parent care is becoming a "normative family stress." Reflecting this growing concern over the effects upon middle-aged women of caregiving for the elderly, a flurry of studies on the burden of caregiving have appeared in gerontology journals in recent years. As Linda George writes, "Not since the debate about disengagement versus activity theory has a single issue so intensely captured the attention of gerontology researchers." (1990:580). Further, concerns about the economic, social, and emotional costs of caregiving extend beyond the burden it places upon the children (particularly daughters) of the old. Issues involving long-term care in institutions also command increasing attention. How will the needs of a rapidly growing population of impaired and dependent old persons be met in the future?

Social Roles for the Elderly

A fourth challenge of the aging of the US population concerns the roles available to the elderly in society. Since those reaching old age are increasingly well-educated, healthy, and economically secure, one might expect that they would increasingly make productive contributions to the society. But this does not appear to be happening. Opportunities and incentives

for older persons to engage in productive social activities have declined in recent decades. Research on the contributions of the elderly in such areas as work, politics, family, religion, and volunteer service organizations is deficient, but there is no evidence that norms encouraging continuing contributions in these areas have developed (Uhlenberg 1988b). Indeed, the growing emphasis upon leisure activities in old age (Cutler & Hendricks 1990) suggests that the old increasingly are excused from societal responsibilities. Some emphasize the growing potential this provides for older persons to find personal fulfillment in retirement after years of hard work. Others express concern about negative consequences of encouraging the old to build their lives around leisure activities. Riley & Riley, for example, point to the waste of potential contributions and the trivialization of later life associated with older persons retreating from productive activities. They write, "increasing numbers of competent older persons and diminishing role opportunities cannot long coexist" (Riley & Riley 1989:28).

One might argue about the accuracy and/or significance of the four challenges of population aging to the society that are discussed in this section. But each one is a salient issue. That is, these concerns about a growing lack of "fit" between the older population and the roles they fill are being discussed. And these discussions lead to debates over what direction aging policy should take.

POPULATION DEBATES RELATED TO POPULATION AGING

Social policy debates related to population aging can be divided into three major categories. First are a set of policies that would alter the aging of the population. The logic behind this approach is that any challenge associated with an increasingly old population could be ameliorated by reducing the future aging of the population. A second category of policies stresses possibilities for altering the role played by the elderly in society. Policy proposals with this thrust emphasize the social construction of aging and the possibilities for changing how people function in old age. Finally, a third category of proposals deals with issues related to the locus of responsibility for supporting the dependent elderly. The current mix of responsibilities between the state, the family, and the individual could be altered in several directions. Several specific policy issues within each of these broad categories are discussed in this section.

Policies to Alter the Aging of the Population

The observation that "demography is not destiny" surely is correct. The future of aging depends upon many factors other than the relative size and composition of the older population. Nevertheless, population characteristics are

relevant for the types of social challenges discussed in the preceding section, and it may be possible to use social policy to alter demographic behavior. Any comprehensive examination of aging policies must consider the possibility of altering each of the demographic variables that directly influences the age structure (fertility, migration, mortality).

PRO-NATALISM Most developed countries, including the United States, have experienced below-replacement level fertility since the 1970s, and the anticipated future aging of these populations is based upon the assumption of continued low fertility. Since the age structure of a population is sensitive to changes in fertility, as noted earlier, increasing the birth rate would slow (or stop, or reverse) future population aging. Policy proposals related to this approach must deal both with the effectiveness of pro-natalist policies and with the desirability of increasing fertility even if it is possible.

A lively discussion of pro-natalist policies occurred in the 1930s (Glass 1940, Spengler 1938) but then faded away with the post-war baby boom. Recent concerns over population aging have stimulated a revival of interest in this topic (Wattenberg 1989, Teitelbaum & Winter 1985). Evaluations of deliberate government efforts to increase fertility in European countries concluded that propaganda campaigns and modest economic incentives for bearing children have little effect (Demeny 1986, McIntosh 1986). Policies that create obstacles to preventing birth (bans on abortion and/or contraception) may be effective in the short run (Teitelbaum & Winter 1985), but they raise significant ethical issues and may be ineffective in the long run as populations find ways to circumvent the restrictions. Whether or not effective pro-natalist policies for modern societies could be designed is, at present, an open question.

If effective pro-natalist policies could be developed, two arguments against implementing them must be faced. One objection concerns the selectivity of those most likely to respond to economic incentives for increasing childbearing. If it is the least educated and least skilled women who increase their fertility (since they experience lowest opportunity costs for bearing children), then an increasing proportion of children would grow up in families with fewest resources for equipping children to become productive members of society. If the cost of increasing the proportion of the population that is not old is a reduction in its productive capacity, it is not clear that anything is gained. A second objection to countering population aging with increased fertility concerns the consequences of population growth. To the extent that sustained population growth threatens environmental quality, this cure for population aging may be worse than the illness.

HIGH IMMIGRATION Encouragement of higher immigration as a strategy to reduce population aging has received little attention and merits little. Whatev-

er the pros and cons of encouraging immigration, the effect of differing immigration rates upon the age distribution is minimal. While the immediate effect of increasing the number of young adult immigrants is an addition to the size of the labor force and to the number of births, in the long run the immigrants and their children enter old age. Projections of the population under varying assumptions of migration level show how small the consequences are for the age distribution of the population. For example, with a TFR of 1.8, the proportion of the US population over age 65 in 2100 would be .240 if there was no future immigration, compared to .226 if there was an annual net immigration 700,000 (Coale 1986). Further, the effects of immigrants' ages, within a plausible range, upon the age composition of the total population are relatively insignificant (Arthur & Espenshade 1988). While immigration policy will have little impact upon the proportion of old people in the future, it will, of course, affect the total size of the population and the racial/ethnic composition of the old and non-old population.

RATIONING HEALTH CARE TO THE OLD Like fertility and migration, mortality patterns may be affected by social policy. Policies to invest fewer resources in extending life at the oldest ages could reduce the growth of the oldest-old population. Indeed, such ideas are receiving serious consideration in the form of a debate over rationing health care to the elderly (Callahan 1987, Smeeding 1987, Strosberg et al 1989).

The combination of new medical technology and the expansion of public funding of health care since 1970 has both reduced mortality at the older ages and greatly increased health care expenditures on the elderly (Davis 1986, Callahan 1986). With the prospect of an aging population and continuing technical advances, Aaron observes that:

All developed nations face a profound dilemma—to bear the rapidly increasing costs of providing care to aging populations or, alternatively, to ration care, and in so doing deny some potential benefits to some patients. (1986:24)

Callahan (1987) responds to this challenge by proposing a schema for rationing government-financed health care to those above about age 80 (his assessment of when a “natural life span” has been lived out). Past this age, death would not be resisted by use of life-extending technologies; medical care would be used only to relieve suffering. While such a policy which explicitly rations health care on the basis of chronological age meets with vehement opposition from some (Binstock & Kahana 1988), the issue is not likely to fade away as long as health care expenditures continue their upward spiral.

CHANGING THE AGE OF OLD AGE The final policy proposal to alter the aging of the population is the most direct—it would change the chronological

age at which a person is recognized as old (Torrey 1982, Uhlenberg 1988a). For a variety of purposes, reaching age 65 in contemporary society entitles one to special benefits—full Social Security benefits, Medicare coverage, tax advantages, and senior citizen discounts for many purchases. Reflecting the semi-official status of age 65, statistics on the older population routinely use the category 65+. Equally significant, it is around this age that labor force participation ceases for most individuals. Thus, despite the heterogeneity within cohorts at age 65 (Dannefer & Sell 1988), age 65 has become the threshold marking entrance into old age.

With increasing longevity and changing characteristics of cohorts approaching later life, the logic of maintaining age 65 as a beginning of old age can be questioned. Changing the age for entitlement to old age benefits might not affect biological aging, but it could alter the future economic burden of supporting a growing dependent older population. Indeed, a 1983 change in the Social Security Act calls for gradually increasing the age for full Social Security benefits to 67 by 2027. If the age criterion were advanced further (e.g. to 72) and extended to the whole range of old age entitlement programs, the effects of future population aging could be reduced significantly. However, changing the age of old age, without concurrent changes in other aspects of the social structure, would increase the vulnerability of the near-old population (Uhlenberg 1988a).

Policies to Increase Productivity or Decrease Dependency of the Old

A number of authors have noted the tendency of modern societies to divide the life course into three major stages—education, work, leisure (Best 1980, Riley 1978). Kohli (1986, 1988) argues that the key to understanding this tripartition of the life course is work. Education prepares the young for work, work is the central activity of adults, and retirement removes the old from work. Meyer (1986) and Mayer & Schoepflin (1989) stress the role of the welfare state in creating this periodization of life. The outcome, in any case, is an older population that is removed from education and work and which has no clear productive role in the society. As the relative size of this dependent older population increases, there may be growing interest in policies that would increase the productivity of the old and/or decrease their dependency upon the working population.

RESTRUCTURING THE LIFE COURSE The division of the life course into the three boxes of education, work, and leisure emerged with the institutionalization of education and retirement. The age stratification associated with these developments may harm human development at all stages of life. Young people prepare for work without adequate exposure to the realities of work.

Middle-aged people are overburdened with work responsibilities. And the elderly become obsolete, unproductive, and marginal to the society. This organization of the life course also significantly creates the economic burden of supporting a dependent older population. From both humanistic (Moody 1988) and economic (Morrison 1986) perspectives, an argument is made in favor of social policies that would encourage a greater mix of leisure, education, and work throughout life. Along with other potential benefits, restructuring the life course could increase the productive contributions of the elderly to the society.

In an economic system where the knowledge industry plays a central role, the need for life-long education to prevent obsolescence of skills as one ages seems obvious. The popularity of Elderhostel and the increased number of older persons in universities indicates some movement toward a greater role for education in later life (Moody 1988). But these approaches to life-long education reach mostly the college educated and have little impact upon extending the worklife. Government sponsored job training programs designed to upgrade skills needed in the labor market (Comprehensive Employment and Training Act; Job Training Partnership Act) have attracted very few older persons (Sandell 1988). Federally funded training programs might serve more older persons by focusing upon their special needs and characteristics (Sandell 1988). Formal higher educational systems might reach more elderly by introducing innovative and nontraditional programs (Okun 1982). Even more important, however, are employee-sponsored training programs that allow workers to upgrade skills and adapt to changes in job requirements necessitated by technological innovation (Meier 1988, Sterns 1986). Through tax credits, training subsidies, and other incentive schemes, government policy could encourage and facilitate investment in human capital formation over the entire life course (Moody 1988).

While increasing the economic productivity of older persons requires greater investment in their education, it is equally important to provide employment opportunities. Existing obstacles to the employment of older workers include both age discriminatory personnel practices and inflexibility of work options. The Age Discrimination in Employment Act of 1967, amended in 1978 and 1986, was designed to protect the rights of older workers with respect to hiring, discharge, pay, promotion and fringe benefits. Nevertheless, widespread discrimination against older workers is still reported (Sandell 1988). Greater enforcement of existing policy is needed to reduce this obstacle to continued employment of older workers.

The paucity of alternative work options in later life reflects the rigidity of the linear career plan that has evolved. Expectations of increasing job status and remuneration with seniority in the labor force limit options for moving to less demanding jobs with corresponding downward adjustments in salary and

fringe benefits. Under these conditions, it is economically rational for employers to replace older workers with younger ones who can perform the same job at a lower cost. Opening up alternative work options could benefit those nearing the end of their work life (as well as other potential workers who desire something other than full-time, fixed schedule work). Providing more alternatives could be encouraged by appropriate social policy (Morrison 1986; Meier 1988). One appealing, but not widely available, option is phased retirement, where work hours are gradually reduced with reduced salary and partial pension payment. Another possibility involves creating annuitant pools of a company's retirees for temporary, full, or part-time work assignments (Morrison 1986). A variety of other well-known possibilities (part-time, flex-time, job sharing) are also available to increase the likelihood of matching desires for continued work in later life with employment opportunities.

Promoting life-long education, reducing age discrimination, and increasing alternative work options would lead to greater productivity of older persons provided that they were motivated to fill work roles. But would persons continue working later in life (or forgo early retirement) if these changes occurred? Are people retiring voluntarily because pensions plans make it economically feasible? Or, involuntarily because of disabilities and labor market obstacles? There is substantial agreement that both economic and non-economic factors influence the retirement decision and that retirement patterns could be modified through policy measures (Quinn & Burkhauser 1990, Sickles & Taubman 1986, Parnes 1988). Whether these policies should emphasize disincentives for retiring early (e.g. reduced pension benefits) or incentives for working longer (improved opportunities), or some combination of the two is, not surprisingly, debated on both ethical and empirical grounds.

DECREASING DEPENDENCE Numerous cross-sectional studies document the obvious: age is correlated with functional capacity and disability status. Older persons are more likely than younger adults to experience decrements in physical and cognitive ability that restrict ability to function independently. Consequently, a major concern related to an aging population is the expected increase in prevalence of older persons dependent upon others for care (Manton 1989a, Soldo & Manton 1985, Aaron et al 1989, Callahan 1986). But is the existing relationship between age and disability inevitable? Or, might it be altered through appropriate intervention?

For some time it has been common to separate the effects of specific disease processes on functional capacity and disability from the effects of aging per se. "Normal aging" is then interpreted as changes occurring over time in a cohort from which the diseased population has been excluded. This perspective counters an ageist view that confounds effects of disease with effects of growing older. On the one hand, it argues that greater attention

should be directed toward reducing disease and/or its consequences among the elderly. This should result in reducing the relatively high incidence of disability that exists. On the other hand, this perspective accepts the premise that normal aging involves biological decline and increasing likelihood of disability, since these are observed in the non-diseased elderly.

More recently, the concept of "normal aging" has been criticized. Rowe & Kahn write:

The emphasis on "normal" aging focuses attention on learning what most older people do and do not do, what physiologic and psychologic states are typical. It tends to create a gerontology of the usual. (1987:143)

Rather than accepting the aging process as fixed and immutable, a range of interventions are proposed that could alter the level of dependency in later life (Riley & Riley 1989). Changing behaviors related to exercise, diet, use of alcohol and drugs, etc, could reduce disabilities considered as part of normal aging (Rowe & Kahn 1987, Manton 1989b). Specific interventions in the health, education, and work institutions could increase sense of control (Rodin 1989) and improve levels of cognitive functioning (Standinger et al 1989) in later life. New approaches to rehabilitation have the potential of reversing or minimizing the dependency of older persons who are now neglected (Ory & Williams 1989). Policies that concentrate on improving the quality of later life can have the positive side-effect of lessening the future burden of caring for dependent older persons by reducing the incidence and prevalence of disabilities (Riley & Riley 1989).

Policies Affecting Locus of Responsibility

The third category of policy debates related to support of an aging population concerns the relative responsibility of the state, the family, and the older individual. This issue is simply noted here without elaboration. The central topic in this controversy is the future of the Social Security Program, and the literature dealing with this is vast. Should the state maintain or expand its current level of support of older persons? If so, how should the funding of OASI and Medicare be dealt with as the ratio of retirees to workers changes? If not, can adult children be induced to assume greater responsibility for their aging parents? (Changes in the American family raise a host of questions related to future inter-generational relations.) Or, should more emphasis be placed upon the responsibility of individuals to prepare for their own old age? The arguments and proposals surrounding these issues require a separate review article and cannot be explored within the limits of this paper.

CONCLUSION

Demographic changes over the twentieth century have produced the progressive aging of the US population. At the beginning of the century, 4% of the population was over age 65; by the end of the century it will be 13%. But population aging has not yet run its course. A dramatic increase in the older population will occur as the baby boom cohorts reach old age in the two decades following 2010. The "best guess" of the US Census Bureau indicates that 22% of the population will be over age 65 by 2030. While the agedness of this projected population is unprecedented, the societal significance of continued population aging depends, to large extent, upon how old age is socially structured.

As the life course currently is organized, old age is a stage of life beginning in the early 60s in which retirement from work and most other responsibilities is expected. This arrangement encourages a prolonged period of economic dependence at the end of life. Further, it provides few incentives for older persons to make productive contributions to the society, and it creates obstacles to their engagement in many productive activities. Consequently, large transfers from the working population to the retired are required, and potential contributions of the elderly to societal well-being are lost. In addition, many adult children face a long period of being responsible for the care of their aging dependent parents. The changing ratio of the older to younger adults associated with population aging challenges this structure of old age. This challenge is further accentuated by changes occurring in the characteristics of cohorts entering old age. These cohorts contain increasing numbers of individuals who are well educated, economically secure, politically astute, and in relatively good health. In short, demographic and social changes over the twentieth century have created a growing mismatch between the abilities of older people to make significant contributions and the social role they are expected to fill.

A concern over this mismatch leads to the discussion of aging policy. How might social policies increase the productivity of the elderly and/or reduce the burden of supporting a growing dependent older population? Three broad categories of social policy responsive to the challenges of population aging are suggested in this paper. First are policies that attempt to alter the age structure—i.e. reduce the proportion old in the population. Efforts to alter the actual age structure do not offer real long-term solutions, since modern demographic regimes inevitably produce populations with more than 20% over age 65. More promising are policies that advance the chronological age at which individuals are entitled to old-age benefits. A second cluster of policies aim to restructure the meaning of old age. One thrust would increase the role of education and work in later life, while a complimentary thrust

focuses on interventions to reduce the disabilities and frailties associated with old age. A third category of policies addresses the relative role that the state, the family, and the individual should have in supporting the elderly.

The dynamics of population change and social change are stimulating a lively debate on how social policy might shape the future of aging. In this debate, many voices are competing to be heard. Many of the views expressed lack insight into fundamental aspects of population aging and life course dynamics. Social scientists can contribute to this important discussion by elucidating how the process of cohort succession alters the character of the older population and how the social structure shapes the aging experience.

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